
Tuesday, July 22, 2025, 6:00 PM
Council Chambers
One DesCombes Drive
Broomfield, CO 80020

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1. Meeting Commencement

- 1.A. Pledge of Allegiance
- 1.B. Review and Approval of Agenda

2. Petitions and Communications

- 2.A. Update from Executive Director of E-470 Public Highway Authority
- 2.B. Child Support Proclamation
- 2.C. Broomfield Open Space Foundation - Nature Fest
- 2.D. National Night Out

3. Councilmember Reports

4. Public Comment

5. Reports

- 5.A. Expense Report for Elected Officials- Second Quarter 2025
- 5.B. Master Services Agreement Quarterly Report - June 2025

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6. Consent Items

- 6.A. Minutes for Approval
- 6.B. Ordinance Approving Civil Enforcement in Municipal Court - First Reading
 - Ordinance 2271 approving Civil Enforcement in Municipal Court
- 6.C. Authorized Spending for On Demand Services under Master Services Agreements - Water and Utility Supplies and Battery Powered Landscape Equipment
 - Resolution 2025-118 authorizing expenditures under Master Service Agreements with Core and Main LP and Rexel USA, Inc., TNT Fleet Services, Inc. and Mac Equipment, Inc.
- 6.D. Amendment Three to the Intergovernmental Agreement with Regional Transportation District (RTD) for Local Contribution to Bicycle Shelters
 - Resolution No. 2025-110 approving Amendment No. 3 to the Intergovernmental Agreement with the Regional Transportation District for Highway 36 Bicycle Shelters
- 6.E. Board of Equalization (BOE) Proposed Resolution for Approval of Mutual Agreements for Abatements over \$10,000
 - Resolution No. 2025-115-BOE approving a Mutual Agreement on an Abatement over \$10,000

7. Action Items

7.A. Public Hearing Natural Medicine Ordinance - Second Reading

— Ordinance 2270 an ordinance amending the Broomfield Municipal Code to add natural medicine regulations

7.B. Broomfield Water Recovery Facility (BWRF) Early Work Guaranteed Maximum Price (GMP) Moltz Construction and Carollo Consulting Agreements Phase 1 and 1b

— Resolution No. 2025-12 approving the Guaranteed Maximum Price (GMP) Amendment 1 to the Construction Agreement with Moltz Construction for the Water Recovery Facility (WRF) Phase 1 Improvements EWP.

— Resolution No. 2025-13 approving the Consulting Agreement with Carollo Engineering Company for Engineering Services during Construction of Water Recovery Facility (WRF) Phase 1 Early Work Package (EWP).

— Resolution No. 2025-109 approving the Consulting Agreement with Carollo Engineering Company for Engineering Design Services for the Water Recovery Facility (WRF) Phase 1b, 30 Percent Design

7.C. 2025 Anticipated Aggregate Spend Agreement for Vehicle Purchases

— Resolution 2025-08 for Anticipated Aggregate Spend Agreement with Sill-Terhar Ford for Vehicle purchases.

7.D. 2025 Large Equipment Purchases

— Resolution 2025-07 authorizing and approving a Large Equipment purchase for the Parks Department.

7.E. Medium Density Residential Zone District Updates Ordinance - First Reading

— Ordinance 2275 an ordinance to amend the Broomfield Municipal Code, Title 17 related to medium to high density residential zoning

8. Mayor and Councilmember Requests for Future Action

9. Adjournment

The City and County of Broomfield operates without regard to race, color, national origin, ethnicity, citizenship, immigration status, gender, age, sex, sexual orientation, gender identity, gender expression, marital status, source of income, military status, or disability in all programs and activities.

Individuals with disabilities requiring accommodation or persons needing a language interpreter must submit such a request to the City Clerk no later than noon on Thursday prior to the scheduled Council meeting to allow adequate time to make arrangements. Please call 303.438.6332 or TDD 303.465.5411 or write cityclerk@broomfield.org to make your request.

During the meeting, individuals can click the "CC" button on Live Council meeting video feeds to view closed captioning. Auxiliary hearing aid equipment can be requested on the night of the meeting with our AV team located at the back of the Council Chambers.





City and County of Broomfield

City Council Regular Meeting

B. Child Support Proclamation

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Petitions and Communications Item: 2B.
Presented By	
Lisana Muñoz, Director of Human Services	
Community Goals	
☒ Financial Sustainability and Resilience ☒ Thriving, Diverse, Safe and Welcoming Community	

Overview

Colorado Child Support Awareness Month is observed each year across the state to emphasize the critical importance of ensuring children receive the financial and medical support they need from both parents. The goal of Colorado's Child Support Services (CSS) Program is to promote consistent support payments through a family-focused service model. In essence, Colorado Child Support Awareness Month is a powerful reminder of the state's commitment to ensuring every child has the resources and support they need to thrive. Through coordinated programs and community engagement, Colorado continues to build a strong foundation for families and children statewide.

Attachments

[Memo for Child Support Proclamation 2025.pdf](#)

[Child Support Awareness Month Proclamation 2025.pdf](#)

Summary

[View Correspondence](#)

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Colorado Child Support Awareness Month is observed each year across the state to emphasize the critical importance of ensuring children receive the financial and medical support they need from both parents. First established nationwide in 1995 by President Bill Clinton, this month-long observance is led in Colorado by the Department of Human Services in partnership with local agencies like Broomfield Child Support Services.

The goal of Colorado's Child Support Services (CSS) Program is to promote consistent support payments through a family-focused service model. This approach not only addresses the financial responsibilities of parents but also works to remove obstacles that may prevent them from fulfilling their obligations—ultimately supporting the well-being and growth of children throughout the state.

Throughout the month, CSS conducts a variety of public outreach initiatives, including awareness campaigns such as media advertisements in the Denver metro area. Events like the annual proclamation by Governor Jared Polis further affirm the state's dedication to supporting families and encouraging responsible parenting.

Local programs, such as Broomfield CSS, play a vital role in these efforts. Each year, Broomfield CSS helps collect significant support—over \$3.1 million—for families. These programs provide key services including the establishment of paternity and support orders, enforcement of child support, and securing medical coverage for children.

Additionally, CSS promotes active involvement from both parents, recognizing its positive effect on children's development. Activities like "green days," where staff wear green to show support, help foster community participation and highlight the importance of child support.

In essence, Colorado Child Support Awareness Month is a powerful reminder of the state's commitment to ensuring every child has the resources and support they need to thrive. Through coordinated programs and community engagement, Colorado continues to build a strong foundation for families and children statewide.

Prior Council or Other Entity Actions

7/23/2024: [Proclamation Declaring August 2024 as Child Support Awareness Month](#)

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

For Council to declare and proclaim August 2025 as Child Support Awareness Month in Broomfield.



Proclamation

PROCLAMATION DECLARING August, 2025 AS CHILD SUPPORT AWARENESS MONTH

- WHEREAS, parental financial and emotional support plays a crucial role in child success; and*
- WHEREAS, caregiver support significantly impacts child health and well-being; and*
- WHEREAS, the collective support of parents, extended families, caregivers, and the community fosters the healthy development of children into productive adults; and*
- WHEREAS, we are dedicated to enhancing children's health and well-being by offering comprehensive, family-centered child support services aimed at ensuring regular and timely parental financial contributions; and*
- WHEREAS, consistent child support payments enhance parent-child relationships, boost children's educational achievements, and reduce dependence on public assistance programs; and*
- WHEREAS, this month, we honor parents who diligently support their children and recognize Broomfield's child support professionals for their commitment to treating families with dignity and respect.*

NOW, THEREFORE, I, Guyleen Castriotta, Mayor of the City and County of Broomfield, do hereby declare and proclaim August, 2025 as:

CHILD SUPPORT AWARENESS MONTH IN BROOMFIELD

In witness whereof, I hereunto set my hand and official seal on this the 22nd day of July 2025.

Guyleen Castriotta
Mayor



City and County of Broomfield

City Council Regular Meeting

A. Expense Report for Elected Officials- Second Quarter 2025

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Reports Item: 5A.
Presented By	
Ashandra Corman	
Community Goals	

Overview

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The Second Quarter Report for Council's 2025 training and travel expenses and community relations events.

Attachments

[Expense Report for Elected Officials - 2nd Quarter 2025 \(1\).pdf](#)

[2025 EXPENSE REPORT FOR ELECTED OFFICIALS - 2025 \(4\).pdf](#)

Summary

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Sections 3.10(b) of the City Council's Expense Policy for Elected Officials states that after attending a training or travel event, each elected official shall provide a written or oral report.

If a Councilmember submitted a written report regarding conferences and travel, they are available on Broomfield's [website](#).

Section 3.10(c) of the City Council's Expense Policy for Elected Officials requires quarterly reports by the finance department regarding current expenses for training and travel, and community relations activities.

Attached is the second quarter report for Council's 2025 training and travel expenses and community relations events.

It should be noted that the Mayor and Councilmembers may share allocations with other Councilmembers not to exceed the overall budgeted amount (\$76,000); transfers between Councilmembers are captured under Budget Transfers/Adjustments.

In this quarter, \$11,043.83 of the Travel and Training Budget was used with the Council's permission and pursuant to their policies. These expenditures did not cause the Council to exceed the overall budget of \$76,000.

Quarter 1 (January 1 - March 31, 2025): \$23,392.95 used

Quarter 2 (April 1 - June 30, 2025) \$11,043.83

Quarter 3 (July 1 - September 30, 2025)

Quarter 4 (October 1 - December 31, 2025)

Total used Year to Date: \$34,436.78 with a remaining balance of \$41,563.22

Financial Considerations

The total 2025 budget for the Mayor's and Council's Training & Travel and Community Relations expenses is \$76,000, as broken down below:

Annual Training & Travel Allowance for the Mayor	\$10,000.00
Annual Training & Travel Allowance for 10 Councilmembers (\$6,000 per Councilmember)	\$60,000.00
Annual Community Relations Allowance for the Mayor	\$1,000.00
Annual Community Relations Allowance for 10 Councilmembers (\$500 per Councilmember)	\$5,000.00
Annual Total	\$76,000.00

It is important to note that in the Expense Policy, these line items are not provided but for tracking purposes; Training & Travel and Community Relations expenses are tracked separately due to IRS policies for

training and travel expenses.

Prior Council or Other Entity Actions

The City Council approved [Resolution No. 2008-133](#), adopting an Expense Policy for Elected Officials on July 8, 2008.

The City Council approved [Resolution No. 2010-92](#), revising the Expense Policy for Elected Officials on July 13, 2010.

The City Council approved [Resolution No. 2018-181](#), revising the Expense Policy for Elected Officials on December 11, 2018.

The City Council approved [Resolution No. 2025-09](#), revising the Expense Policy for Elected Officials on January 14, 2025.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

N/A - Information Only

Alternatives

N/A

Chamber Event	\$35.00			\$35.00								\$70.00
May Mileage	\$121.26											\$121.26
Metro Area County Commissioners Meeting Parking and Mileage						\$23.83						\$23.83
												\$0.00
												\$0.00
												\$0.00
												\$0.00
												\$0.00
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Total	\$991.91	\$0.00	\$0.00	\$35.00	\$867.23	\$23.83	\$0.00	\$46.53	\$0.00	\$0.00	\$0.00	\$1,964.50
Training and Travel Expenses												
NACo Legislative Conference March 1-4, 2025 - Washington D.C.												
Registration					\$590.00				\$530.00		\$530.00	\$1,650.00
Hotel					\$1,362.40				\$1,594.31		\$1,502.66	\$4,459.37
Air/Transport.					\$551.36				\$536.96		\$424.07	\$1,512.39
Mileage					\$40.07							\$40.07
Meal / Per Diem					\$409.00				\$337.00		\$337.00	\$1,083.00
Misc./Ride Share					\$164.90							\$164.90
Total	\$0.00	\$0.00	\$0.00	\$0.00	\$3,117.73	\$0.00	\$0.00	\$0.00	\$2,998.27	\$0.00	\$2,793.73	\$8,909.73
NLC Congressional City Conference March 10-12, 2025 - Washington D.C.												
Registration	\$870.00							\$780.00	\$670.00		\$745.00	\$3,065.00
Hotel	\$1,525.92							\$1,525.92	\$1,525.92		\$2,023.35	\$6,601.11
Air/Transport.	\$655.49							\$393.96				\$1,049.45
Mileage												\$0.00
Meal / Per Diem	\$261.00							\$322.00	\$322.00		\$322.00	\$1,227.00
Misc./Ride Share & Airport Parking	\$328.64											\$328.64
Total	\$3,641.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,021.88	\$2,517.92	\$0.00	\$3,090.35	\$12,271.20
CCI Foundation June 2-4, 2025 - Summit County												
Registration					\$455.78							\$455.78
Hotel					\$679.89							\$679.89
Air/Transport.												\$0.00
Mileage					\$117.52							\$117.52

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[illegible]

[illegible]



City and County of Broomfield

City Council Regular Meeting

B. Master Services Agreement Quarterly Report - June 2025

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Reports Item: 5B.
Presented By	
David Acevedo-Yates	
Community Goals	

Overview

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Quarterly reporting of approved Master Service Agreements, including utilized budget, as requested for Resolution No. 2025-59.

Attachments

[Memo for Master Service Agreement Budget Report - June 2025.pdf](#)

Summary

[View Correspondence](#)

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[Resolution No. 2025-59](#) was authorized by City Council on March 25, 2025, permitting Departments to utilize their authorized budgets through purchase orders, up to the approved budget amount for on-call, on demand and emergency expenditures, with the approval from the City and County Manager, or designee.

Master service agreements with no dollar value have been used as the contracting method, which has increased efficiency for these types of expenditures.

The use of master services agreements are initially non-encumbering zero-sum contracts, and have Broomfield's standard terms and conditions. Encumbrances of funds occur when any on-call, on demand or emergency services are identified and purchase orders are issued confirming the work, and at that time encumbering any funds.

As part of the approval of this resolution, City Council has requested quarterly reporting of these approved agreements and the budgets being utilized.

Financial Considerations

Listed below are vendors who received purchase orders, as part of their Master Services Agreements to enter into projects with Broomfield. These are organized by the budget account code and vendor.

Budget Account Code	Total Budget	Encumbered Budget	Vendor	MSA Encumbrance	Department-Division	MSA Category	Total Purchase Orders
01-12200-53320	\$472,000.00	\$174,430.33	Diversified Body and Paint Shop, Inc	\$49,592.79	Public Works - Fleet Maintenance and Risk Management	Vehicle Body Work Services	6
01-30200-52720	\$462,350.00	\$317,680.42	Diversified Body and Paint Shop, Inc	\$6,756.99	Public Works - Fleet Maintenance	Vehicle Body Work Services	1
01-30200-53620	\$110,200.00	\$66,010.00	Diversified Body and Paint Shop, Inc	\$6,756.99	Public Works - Fleet Maintenance	Vehicle Body Work Services	1
01-30200-52720	\$462,350.00	\$317,680.42	McCandless Truck Center, LLC	\$35,000.00	Public Works - Fleet Maintenance	Vehicle Body Work Services	1
01-30200-53620	\$110,200.00	\$66,010.00	McCandless Truck Center, LLC	\$35,000.00	Public Works - Fleet Maintenance	Vehicle Body Work Services	1

01-60300-52190	\$79,120.00	\$13,672.50	Grandview Landscape Irrigation	\$8,750.00	Parks - Parks Maintenance	Landscaping and Irrigation	1
01-60300-53690	\$2,644,991.00	\$1,542,286.04	Grandview Landscape Irrigation	\$40,070.00	Parks - Parks Maintenance and Parks - Turf Mowing	Landscaping and Irrigation	2
22-70080-55200	\$1,226,285.00	\$965,697.40	Grandview Landscape Irrigation	\$27,535.00	CIP - Drainage & Stormwater and CIP - Landscaping	Landscaping and Irrigation	3
22-70080-55200	\$1,226,285.00	\$965,697.40	L.T.A. Lawn Services, LLC	\$28,410.00	CIP - Landscaping	Landscaping and Irrigation	3

The following vendors were not utilized this quarter.

Colorado Designsapes

Elite Industries

Richdell Construction

Western States Reclamation

ABCO Contracting

Hallmark, Inc.

Prior Council or Other Entity Actions

March 25, 2025 - Council approved [Resolution No. 2025-59](#) authorizing the use of master service agreements and delegating purchasing authority to the City and County Manager or her designee for specific vendors' on-call, on demand and emergency expenditures in excess of \$200,000.

Boards and Commissions Prior Actions and Recommendations

NA

Proposed Actions / Recommendations

The Procurement team welcomes questions and comments from the City Council.

Title of Memo: Master Services Agreement Quarterly Report- June 2025
Prepared By: Tracy Stibitz, Procurement Contract Administrator

Alternatives

NA



City and County of Broomfield

City Council Regular Meeting

A. Minutes for Approval

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Consent Items Item: 6A.
Presented By	
Crystal Clemens, City Clerk	
Community Goals	

Overview

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Approval of Minutes for the Regular City Council Meeting of July 8, 2025.

Attachments

[Minutes July 8 2025_Redacted.pdf](#)

Minutes for the City Council Regular Meeting

One DesCombes Drive, Broomfield, CO 80020

July 8, 2025, 6:00 PM - July 8, 2025, 10:31 PM

Roll Call: *(The following members were in attendance)*

- **Guyleen Castriotta**, Mayor
- **James Marsh-Holschen**, Ward 1
- **Kenny Van Nguyen**, Ward 1
- **Paloma Delgadillo**, Ward 2
- **Austin Ward**, Ward 2 (Remote)
- **Jean Lim**, Ward 3
- **Deven Shaff**, Mayor Pro Tem, Ward 3
- **Laurie Anderson**, Ward 4
- **Heidi Henkel**, Ward 5
- **Todd Cohen**, Ward 5

Not Present:

- **Bruce Leslie**, Ward 4

Also Present:

- Jennifer Hoffman, City and County Manager
- Anna Bertenzetti, Deputy City and County Manager
- Dan Casey, Deputy City and County Manager
- Nancy Rodgers, City and County Attorney
- Michelle Parker, Deputy City and County Clerk
- And various staff members

The Mayor called a recess at 8:04 p.m. The meeting reconvened at 8:14 p.m.

The Mayor called a recess at 9:50 p.m. The meeting reconvened at 10:00 p.m.

1. Meeting Commencement

1.A. Pledge of Allegiance 6:01 PM

1.B. Review and Approval of Agenda 6:02 PM

2. Petitions and Communications

2.A. Proclamation Declaring July 22, 2025 as Chief Ramos Day- 6:03 PM

2.B. North Metro Fire District Update- 6:09 PM

3. Councilmember Reports

4. Public Comment

5. Reports

5.A. 2024 Audit and Review of the 2024 Annual Comprehensive Financial Report 6:33 PM

6. Consent Items

Councilmember Nguyen moved to approve the Consent Items 6A, 6B, and 6D-6G. The motion was seconded by Councilmember Delgadillo and passed 9-0.

6.A. Minutes for Approval- 7:05 PM

6.B. Proposed Resolution for Scientific and Cultural Facilities District (SCFD) Funding Allocations for the 2025/2026 Funding Cycle- 7:05 PM

6.C. Resolution Approving an Intergovernmental Agreement with Jefferson County for the construction of a new taxiway - 7:37 PM

**** Item was Removed from Consent**

Councilmember Marsh-Holschen moved to approve Resolution No. 2025-105 approving an Intergovernmental Agreement with Jefferson County for the construction of a new taxiway (Taxiway K) at Rocky Mountain Metropolitan Airport. The motion was seconded by Councilmember Nguyen and passed 9-0.

6.D. Rocky Mountain Partnership 2025 Event Sponsorship- 7:05 PM

6.E. Third Amendment Consulting Agreement Felsburg Holt & Ullevig (FHU) -US287/120th Avenue Sidepath Infill & Transit Access Improvements Project- 7:05 PM

6.F. Request for Executive Session Regarding Open Space Real Estate Transaction- 7:05 PM

6.G. Request for Executive Session Regarding Extraction Oil and Gas- 7:05 PM

7. Action Items

7.A. Proposed Ordinance Amending Broomfield Municipal Code (BMC) regarding Accessory Dwelling Units (ADUs) Code Updates First Reading 7:46 PM

Councilmember Henkel moved to approve Ordinance No. 2265 to amend the Broomfield Municipal Code, Title 17, to revise the regulations for Accessory Dwelling Units. The motion was seconded by Councilmember Marsh-Holschen and passed 9-0.

7.B. Assessor Report on Status of 2025 Real and Personal Property Valuation- 8:16 PM

Mayor Pro Tem Shaff moved to approve Resolution No. 2025-98-BOE authorizing the Mayor to review and sign the 2025 Abstract of Assessment. The motion, seconded by Councilmember Delgadillo, passed 9-0.

7.C. Six Proposed Charter Change Ballot Question Ordinances for the November 2025 ballot - First Reading- 8:42 PM

Councilmember Henkel moved to approve Ordinance No. 2276 - Ballot Question 1A - General Update and Language Revisions. The motion, seconded by Councilmember Marsh-Holschen, passed 9-0.

Councilmember Nguyen moved to approve Ordinance No. 2277 - Ballot Question 1B - Council Qualifications. The motion, seconded by Councilmember Delgadillo, passed 9-0.

Councilmember Henkel moved to approve Ordinance No. 2278 - Ballot Question 1C - Mayor and Council Vacancies. The motion was seconded by Councilmember Nguyen.

Councilmember Ward moved to amend Ordinance No. 2278 to strike the language, "that a vacancy in elected office will occur when an elected official misses 50% or more of the convened Council meetings in a year, and" from the ballot question. The motion was seconded by Councilmember Nguyen, and passed 9-0.

Councilmember Cohen moved to reconsider the amendment, seconded by Councilmember Anderson. The motion to reconsider failed 3-6; opposed by Councilmembers Delgadillo, Henkel, Lim, Marsh-Holschen, Shaff, and Ward.

Councilmember Ward moved to further amend Ordinance No. 2278 to add the term, "general or" before "coordinated election." The motion was seconded by Councilmember Marsh-Holschen and passed 8-1; opposed by Councilmember Cohen.

The original motion to approve Ordinance No. 2278, as amended, passed 9-0.

Councilmember Anderson moved to approve Ordinance No. 2279 - Ballot Question 1D - Code of Ethics. The motion was seconded by Councilmember Marsh-Holschen and passed 8-1; opposed by Mayor Pro Tem Shaff.

Councilmember Lim moved to approve Ordinance No. 2280 - Ballot Question 1E - Emergency Ordinance. The motion, seconded by Councilmember Nguyen, passed 9-0.

Councilmember Anderson moved to approve Ordinance No. 2281 - Ballot Question 1F - Intergovernmental Agreements. The motion was seconded by Councilmember Delgadillo and passed 8-1; opposed by Councilmember Henkel.

8. Mayor and Councilmember Requests for Future Action

8.A. Councilmember Cohen's Request for Future Action to bring forth an ordinance amendment to the Broomfield sign code to adopt language to allow temporary signage (Friday to Monday) in the rights of way

9. Adjournment

APPROVED:

Mayor Castriotta

Office of the City and County Clerk



City and County of Broomfield

City Council Regular Meeting

B. Ordinance Approving Civil Enforcement in Municipal Court - First Reading

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Consent Items Item: 6B.
Presented By	
Nancy Rodgers, City and County Attorney	
Community Goals	

Overview

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Ordinance 2271 proposes to set forth an administrative process and penalty for low level property, animal and marijuana and paraphernalia violations. Currently, these tickets must go through the typically criminal, full Municipal Court process. This administrative process is more efficient and straightforward for both staff and residents.

Attachments

[Memo - Proposed Ordinance No. 2271 Approving Civil Administrative Enforcement System in Municipal Court - 1st Reading.pdf](#)

[Ordinance 2271 Approving Civil Administrative Enforcement in Municipal Court.pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

Ordinance 2271 proposes to set forth an administrative process and penalty for low level property, animal and marijuana and paraphernalia violations. Currently, these tickets must go through the typical criminal, Municipal Court process. This administrative process is more efficient and straightforward for both staff and residents.

The primary enforcement mechanism for violations of the Broomfield Municipal Code is the issuance of a summons and complaint into Municipal Court with a mandatory court appearance for the violator and access to the procedures required by criminal law. Many of the code provisions in Broomfield's local laws can be more efficiently addressed outside of the criminal municipal court system and instead through a civil administrative enforcement system. This modification in process and penalties is more efficient for residents and is crafted to obtain quicker compliance. This proposed civil administrative enforcement system is supported by the animal and code divisions of the Police Department, the prosecution division of the City and County Attorney's Office and the Municipal Court.

Financial Considerations

Staff does not believe this Code amendment will have any significant fiscal impact on revenue or expenses. This change is not being proposed as a revenue generator, and it would be speculative to try to estimate what additional revenue, if any, would result from this ordinance. All expenses with implementing this process can be handled by current staff.

Prior Council or Other Entity Actions

N/A

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to proceed forward creating a civil administrative enforcement process, the appropriate motion is...

That Ordinance 2271 be approved on first reading and published in full, and that a second reading and public hearing take place on August 26, 2025.

Alternatives

City Council can reject the concept of a civil administrative enforcement system and continue to address code violations in the current system. City Council can choose to accept some, but not all drafted code provisions into a civil administrative enforcement system.

Detailed Discussion

The Broomfield Municipal Code (B.M.C) sets forth the local laws that the public must comply with. The primary tool that the City has to enforce these rules is a summons and complaint into Municipal Court with a mandatory court appearance. As the Broomfield Municipal Code is currently structured, legal enforcement of most code violations must proceed through the Municipal Court within the process and procedures set up to enforce criminal law violations.

There are code provisions included in the Broomfield Municipal Code that define the laws for how residents maintain their property and control their animals. Examples of these provisions include:

- requiring dogs to be walked on leash (6-12-010 -Running at large prohibited),
- requiring weeds be kept under eight inches in height (8-08-040 Unlawful growth),
- prohibiting the storage of junk vehicles on residential property (8-20-020 Junk Vehicles), and
- prohibiting encroachments from impeding motor vehicle or pedestrian traffic (12-08-020 Limitations).

These code provisions are important to the community and violations of these provisions should be addressed. The philosophy of the Broomfield Police Department's Code and Animal Services divisions is to educate Broomfield residents and obtain voluntary compliance. This can include a reasonable amount of time to correct violations when appropriate. This strategy is effective in the vast majority of cases. However, when there is no compliance with the code after time and/or information is provided, currently the only option to hold the resident accountable and force compliance is the issuance of a summons and complaint into the municipal court criminal justice system.

Proposed Civil Administrative Enforcement System

The proposed ordinance creates an alternative to the municipal court criminal justice system: a civil administrative enforcement system that provides the violator a quick option to pay the set fine and close the matter. Working with the Police Department and the Municipal Court, the City and County Attorney's Office has created a list of code violations that would benefit from a civil administrative enforcement system. With this option, a resident who violates one of the code provisions included in this ordinance can be served a civil administrative citation for the violations with a set fine for the individual to pay. Those violations are:

- Violations of 6-12-010 - Animals running at large;
- Violations of 6-12-070 - Dead animals; disposal; owner notified;
- Violations of 6-12-080 - Disturbing the peace;
- Violations of 6-12-090 - Confinement during estrus;
- Violations of 6-28-010 - Sanitation;
- Violations of chapter 8-08 - Weeds and Rubbish;
- Violations of chapter 8-20 - Junk Vehicles, Repair of Vehicles;
- Violations of chapter 9-19 - Marijuana and Drug Paraphernalia;
- Violations of chapter 9-49-060 - Removal of graffiti required;
- Violations of chapter 9-80-020(A) - Violations (Open containers);
- Violations of chapter 10-06 - Residential Parking Permits;
- Violations of chapter 10-12 - Oversized and Commercial Vehicles;
- Violations of chapter 12-04 - General Provisions (Sidewalks);
- Violations of chapter 12-08 - Encroachments;
- Violations of chapter 12-20 - Street Numbers and Names;
- Violations of chapter 17-32-080 - Off-street parking and additional parking surface requirements;
- Violations of 17-34-070 - Storage containers.

The proposed ordinance creates a civil administrative enforcement system that provides the violator a quick option to pay the set fine and close the matter.

Appeals and Default Judgment

The ordinance also provides a process and procedure for people who would like to appeal the summons and complaint and be heard in Court through a simplified hearing procedure. Additionally, the ordinance sets forth the ability for the Municipal Court Judge to impose a default judgement against violators who refuse to pay their fine and against violators who appeal their summons and complaint but then fail to appear for a scheduled appeal hearing. This default judgement provision prevents cases from remaining indefinitely in the Court system. It also avoids issuing a warrant for the failure to appear by a violator (which may happen if handled through a summons and complaint into the criminal court system). Parts of this administrative process, such as the default judgments, are similar to the procedure that Broomfield currently applies to traffic infractions.

\$1,000 Maximum Cap on Fines

The proposed ordinance is drafted to preserve the discretion of the Court. As proposed, the ordinance includes a cap on fines of \$1,000, but does not include a fine schedule for violations. Rather, the Presiding Municipal Judge has the authority to determine and publish a fine schedule that does not exceed the cap or any amount that Council has set by ordinance.

Criminal Summons Remain An Option for Police Officers

The proposed ordinance is drafted to also preserve the discretion of the Police Department. The ordinance does not mandate that this administrative civil process and penalty be used for any individual animal or property offense. Violations that create unique public safety concerns or repeated violations may not be appropriate for this administrative process and penalty (e.g. continued violations of disturbing the peace with a barking dog after multiple administrative fines may require a criminal summons and complaint with a mandatory court appearance). This ordinance leaves open the option of writing a summons and complaint with a mandatory appearance into municipal court for any of the listed animal or property violations.

Acknowledging that this ordinance now creates a simple fine option for the violations included, the ordinance also amends the possible penalties for animal violation cases that are ultimately written into the municipal court on a mandatory appearance based on aggravated factors or repeated violations. Violators who meet these criteria have either a violation that is aggravated beyond the typical violation or have shown that a minor fine will not deter their actions (or inactions). With this in mind, the ordinance amends the possible fine for animal code violations charged outside of the administrative process penalty to include the amount allowed in the general penalties provision of the Broomfield Municipal Code, 1-12, which is up to a \$2650 fine. The actual amount imposed is ultimately a decision made by the judge at sentencing.

Marijuana and Drug Paraphernalia Violations are currently civil violations with a \$100 fine cap

Included in the list of offenses in this ordinance are the code provisions addressing possession of marijuana and drug paraphernalia. These violations are civil violations of the Broomfield Municipal Code and bring a maximum possible penalty of a \$100.00 fine. Although these offenses are of a different character than the others included in this proposed ordinance, allowing for the police department and courts to address these violations under this civil administrative enforcement system makes sense given the minor possible penalty and civil nature of the violation. The proposed ordinance does recognize the need for a different response to

these violations when the behavior is that of a juvenile thus, the proposed ordinance does not change the required mandatory appearance for juveniles who violate marijuana and drug paraphernalia code provisions.

Delayed Effective Date

Proposed ordinance 2271, if approved, would go into effect September 30, 2025. This one month delay in effective date will give the time needed for the Police Department to prepare the civil citation form and educate patrol officers on the new system. Additionally this will give the Municipal Court the time needed to implement a process for civil citation payments and appeals.

Conclusion

Proposed ordinance 2271 is drafted to fit into the Police Department's Code Compliance and Animal Service Divisions' philosophy of obtaining efficient compliance with property and animal violations of the code. The ordinance creates an administrative process for civil penalties of minor code violations that is crafted to allow for efficient enforcement of the code, promote voluntary compliance with the code, and create a cost and time effective tool for addressing violations that are not timely corrected. This process:

- avoids prolonging the case for an additional six weeks (the typical amount of time between a criminal summons and complaint and an appearance in court),
- avoids a mandatory court appearance for the individual,
- avoids, in many cases, the violation turning into a criminal offense, and
- promotes more efficient compliance, which is the ultimate goal.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2271

An ordinance creating an administrative process allowing civil penalties for certain code violations

Be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 1-13 Administrative Process and Civil Penalties for Code Violations

1-13-010 - Purpose and applicability.

- (A) The purpose of this article is to promote the public health, safety, and welfare by establishing processes and methods to encourage compliance with certain provisions of the Broomfield Municipal Code and by providing for administratively imposed civil penalties and an opportunity for a prompt hearing, appeal, and decision as to code violations.
- (B) This article defines: (1) the administrative process through the municipal court when a notice of violation is issued pursuant to this article as an alternative to prosecution in the municipal court for any alleged violation of the Broomfield Municipal Code; and (2) the process for appeals pursuant to chapter of this code.

1-13-020 - Definitions.

- (A) *Appellant* means a responsible party who is appealing an administrative citation pursuant to this chapter.
- (B) *Enforcement Officer* includes an employee of the City and County of Broomfield who, as a part of, in the course of, or in connection with his or her duties as such employee, has or shall have any responsibility for or in connection with the execution, administration, or enforcement of all or any part of the Broomfield Municipal Code.
- (C) *Responsible Party* means a person or entity who has committed, assisted, or allowed all or part of a code violation. In the case of code violations pertaining to real property, the responsible party may also include firms, partnerships, corporations, the owner, occupant, lessor or tenant, or an individual or entity who, acting as an agent for or in any other legal capacity on behalf of the owner, has

authority over property subject to a notice of code violation or administrative citation issued pursuant to this article.

1-13-030 - Applicable provisions of the Municipal Code.

The following violations of the Municipal Code may be issued a civil penalty pursuant to this chapter 1-13. The reference code provisions are as stated or as they may be amended from time to time.

- (A) Violations of 6-12-010 - Animals running at large;
- (B) Violations of 6-12-070 - Dead animals; disposal; owner notified;
- (C) Violations of 6-12-080 - Disturbing the peace;
- (D) Violations of 6-12-090 - Confinement during estrus;
- (E) Violations of 6-28-010 - Sanitation;
- (F) Violations of chapter 8-08 - Weeds and Rubbish;
- (G) Violations of chapter 8-20 - Junk Vehicles, Repair of Vehicles;
- (H) Violations of chapter 9-19 - Marijuana and Drug Paraphernalia;
- (I) Violations of chapter 9-49-060 - Removal of graffiti required;
- (J) Violations of chapter 9-80-020(A) - Violations (Open containers);
- (K) Violations of chapter 10-06 - Residential Parking Permits;
- (L) Violations of chapter 10-12 - Oversized and Commercial Vehicles;
- (M) Violations of chapter 12-04 - General Provisions (Sidewalks);
- (N) Violations of chapter 12-08 - Encroachments;
- (O) Violations of chapter 12-20 - Street Numbers and Names;
- (P) Violations of chapter 17-32-080 - Off-street parking and additional parking surface requirements;
- (Q) Violations of 17-34-070 - Storage containers.

1-13-040 - Administrative citation.

- (A) An enforcement officer may issue an administrative citation for a violation of the Broomfield Municipal Code imposing civil penalties as set forth in this chapter.
- (B) The administrative citation shall:

- (1) If applicable, identify the real property in violation by address or legal description;
- (2) If notice of violation was required, include the date notice of violation was provided to the Responsible Party;
- (3) State the code provision violated, describe the basic facts constituting the violation, the known date(s) of the violation, and unless no notice of violation was required, advise that the party failed to correct the code violation in accordance with the notice of violation;
- (4) State the amount of civil penalty imposed for the code violation which shall include court costs;
- (5) Explain how and when the civil penalty must be paid and the consequences for failing to do so;
- (6) Describe the procedures and deadline to appeal an administrative citation and consequences for failing to do so;
- (7) Include the signature of the Enforcement Officer.

(C) The administrative citation shall be served on the Responsible Party as follows:

- (1) The Enforcement Officer shall attempt to serve the administrative citation personally on the Responsible Party if possible. If the Responsible Party is not located and the code violation occurred on private property or on property for which the Responsible Party has responsibility, a copy of the administrative citation shall be posted in a conspicuous place on the property.
- (2) If the Enforcement Officer is unable to serve the administrative citation personally on the Responsible Party, the administrative citation shall be sent via first class mail to the Responsible Party. In the case of a violation occurring on private property where the owner of such property is a Responsible Party, the administrative citation shall be sent to the address shown in Broomfield County Assessor's office records. In the case of a violation occurring on property for which the Responsible Party is not the owner, the administrative citation shall be sent to the most recent mailing address available to the city for that responsible party.
- (3) The administrative citation shall be deemed served on the date of receipt by the responsible party if personally served, or, if served solely via first class mail, five business days after the date on which the administrative citation was mailed.

1-13-050 - Administrative citation appeal and hearing procedures.

A Responsible Party issued an administrative citation may appeal it by submitting a notice of appeal pursuant to this section. An Appellant shall only have the appeal rights granted in this section.

- (A) A notice of appeal, together with the processing fee set forth by the Municipal Court, shall be submitted in person or submitted via an online form or other online process made available by the Municipal Court Clerk or sent first class mail to the Broomfield Municipal Court Clerk, within fourteen calendar days from the date of service of the administrative citation. Compliance with this time limit shall be a jurisdictional prerequisite to any appeal brought under this section. Failure to comply with such time limit shall be deemed to waive the right to a hearing and the adjudication of the issues related to the hearing.
- (B) A notice of appeal shall be in writing and shall contain the following:
 - (1) The reasons the Appellant believes the administrative citation fails to allege a code violation, lacks a proper factual basis for the alleged code violation, or is otherwise contrary to the Broomfield Municipal Code;
 - (2) The name, address, e-mail address and telephone number of the Appellant. If the Appellant will be represented by another person, the notice of appeal shall also include the name, address and telephone number of the representative; and
 - (3) The signature of the Appellant, legal representative or corporate agent, as applicable.
- (C) Within seven business days of receiving a notice of appeal submitted in accordance with this section, the Broomfield Municipal Court Clerk shall schedule a date, time and location for a hearing before the Broomfield Municipal Judge.
- (D) Written notice of the date, time and location of the hearing shall be sent via e-mail and first class mail to the Appellant or their representative at least ten calendar days prior to the date of the hearing, using the addresses provided by the Responsible Party in their notice of appeal.
- (E) An Appellant who fails to appear at the hearing is deemed to waive the right to a hearing and the adjudication of the issues raised in the notice of appeal, provided that notice of the hearing was served in accordance with subsection (e) of this section.
- (F) The Municipal Court Judge shall conduct the hearing in an informal manner and shall not be bound by technical rules of evidence, except that only relevant evidence may be admitted and a decision and order shall not be based solely on hearsay evidence. The scope of the hearing shall be limited to the issues raised in the notice of appeal. The standard of proof to be used by the Municipal Court

Judge in deciding the issues at the hearing shall be by a preponderance of the evidence, which the city shall bear.

1-13-060 - Civil penalties.

- (A) A Responsible Party issued an administrative citation is subject to civil penalties as set forth in a judicial order issued by the Chief Judge of the Broomfield Municipal Court which may be up to a \$1000.00 fine.
- (B) Default judgment: the Court shall enter judgment by default against a Responsible Party who is issued an administrative citation with a set fine who fails to timely pay the fine for the offense, or fails to timely appeal, or fails to appear in the Municipal Court on a hearing on the citation.
- (C) The Municipal Court may set aside a judgment entered under subsection (B) of this section on a showing of good cause or excusable neglect by the defendant, or a showing that the court did not have jurisdiction over the subject matter of the code violation or over the person of the violator. The Municipal Court shall have no jurisdiction to set aside a judgment unless a motion has been filed with the Broomfield Municipal Court Clerk within seven calendar days after entry of the judgment.
- (D) Alternative enforcement action: Nothing in this article shall be construed to require that any violations be addressed through the process established in this article as a prerequisite to pursuing the violation as a criminal offense in municipal court; or to require that any violations be addressed through the process established in this article as a prerequisite to pursuing the violation as an offense with a mandatory appearance in municipal court; or to apply to or require the application of the process established in this article prior to the revocation or suspension of any permit or license issued pursuant to law.

Section 2.

Chapter 6-12 - Animals Running at Large; Strays; Impoundment; Disturbing the Peace

6-12-080 - Disturbing the peace prohibited.

- (A) It is unlawful for any animal owner or for any person in charge of any animal to own, keep, or have in his or her possession such an animal which disturbs the peace and quiet of any person or neighborhood by barking, fighting, howling, crying, or emitting any other similar sound.
- (B) No summons and complaint shall be issued nor shall there be a conviction **or penalty assessment** for a violation of this section unless there are at least two or more complaining witnesses from separate households who shall have signed such complaint and shall **be willing and available to testify at a hearing or trial** ~~have testified at~~

~~trial~~. An animal control officer or police officer who has personally investigated the complaint of a single complainant and observed the behavior of the animal complained of, with regard to its barking, fighting, howling, crying, or similar sound, may satisfy the requirement for the second complaining witness and may testify to his or her observations at **hearing or trial**.

- (C) This section shall not apply to an animal control officer in the performance of his or her duties nor to veterinary hospitals.

Section 3.

Updating the possible penalty for criminal violations of the animal code to allow for a fine amount greater than the civil administrative penalties.

6-52-010 - Violation; penalty.

- (A) Any person violating any of the provisions of chapter 6-20 or 6-32, B.M.C. shall be deemed guilty of a misdemeanor, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and upon conviction, such person shall be punishable as provided in chapter 1-12, B.M.C.
- (B) Any person convicted of violating any other provisions of this title shall be punishable by a fine ~~of not more than \$500.00 per violation as provided in 1-12, B.M.C.~~

Section 4.

Clarifying fines for marijuana and paraphernalia offenses follow the procedures set forth in the civil penalty provisions of the municipal code.

9-19-040 - Penalty for violation.

- (A) Violations of section 9-19-020 or subsections (E), (F), or (G) of section 9-19-030, B.M.C., shall be punishable by a fine not to exceed \$100.00 **that is pursuant to the administrative process set forth in chapter 1-13, B.M.C.**
- (B) Violations of section 9-19-020 or subsections (E), (F), or (G) of section 9-19-030, B.M.C. committed by a juvenile are not subject to chapter 1-13 B.M.C. and shall be a mandatory court appearance.

Section 5.

This ordinance is effective September 30, 2025..

Introduced and approved after first reading on July 22, 2025, and ordered published in full.

Introduced a second time and approved on August 26, 2025, and ordered published.

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City and County of Broomfield

City Council Regular Meeting

C. Authorized Spending for On Demand Services under Master Services Agreements - Water and Utility Supplies and Battery Powered Landscape Equipment

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Consent Items Item: 6C.
Presented By	
David Acevedo-Yates	
Community Goals	
☒ Financial Sustainability and Resilience	

Overview

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Resolution No. 2025-118 would approve City Council's delegation of authority to the City and County Manager to approve purchase orders for expenditures in excess of \$200,000, for the Master Service Agreements for Water and Utility Supplies with Core and Main LP and Rexel USA, Inc., and Battery Powered Landscape Equipment with TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc., including those which may exceed aggregate spend thresholds, up to and not to exceed the appropriated budgeted amounts for the services identified.

Attachments

[Memo for Master Services Agreements Water Supplies and Battery Powered Equipment- June 2025.pdf](#)
[Resolution No. 2025-118.pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

[Resolution No. 2025-59](#) was authorized by City Council on March 25, 2025, permitting Departments to utilize their authorized budgets through purchase orders, up to the approved budget amount for on-call, on demand and emergency expenditures, with the approval from the City and County Manager, or designee. The use of Master Service Agreements, combined with the delegation of authorization for budget-approved spending is a more efficient and streamlined process for these types of services. Resolution No. 2025-59 was approved with a specific list of vendors.

Staff is requesting City Council add an additional vendor to the list of those entities for which Council will delegate authority to the City and County Manager to authorize expenditures of on-call, on demand and emergency expenditures through the use of Master Service Agreements in excess of \$200,000. That vendor is:

- Water and Utility Supplies with the following vendors: Core and Main LP and Rexel USA, Inc.
- Battery Powered Landscape Equipment with the following vendors: TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc.

Similar to those vendors listed in Resolution No. 2025-59, Resolution No. 2025-118 would authorize the City and County Manager, or designee, to approve purchase orders for Core and Main LP, Rexel USA, Inc., TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc. up to the approved budget amount of on-call, on demand and emergency expenditures based on the Department's authorized budget. Water and utility supplies routinely exceed the \$200,000 threshold due to the supplies needed to maintain our systems. The increase in the battery powered landscape equipment is due in large part to a new state air quality rule which went into effect June 1, 2025 which prohibits the use by local governments of gas powered push and handheld law and garden equipment with an internal combustion engine smaller than 7 kilowatts from June 1 to August 31. This change in rules resulted in the need to purchase a large amount of new battery-powered equipment this year to comply with the new regulation. In addition, Master service agreements with no dollar value have already been entered with all of these vendors. This resolution is specific to the spending authority for the City and County Manager.

The use of master services agreements are initially non-encumbering, zero-sum contracts, and have Broomfield's standard terms and conditions. Encumbrances of funds occur when any on-call, on demand or emergency services are identified and purchase orders are issued confirming the work, and at that time encumbering any funds. Under the Broomfield Municipal Code, any individual purchase agreement or aggregate purchase agreements in a calendar year over \$200,000 must be approved by Council. By using the master services agreement along with this specific spending authority, staff will not have to return to Council for each expenditure for these specific high-need and on demand vendors.

Financial Considerations

There are no financial considerations for this item, as any work shall occur on an on-call, on demand or emergency basis, through the use of master services agreements, for which the budget has already been appropriated as part of the 2025 budget process.

Staff is requesting City Council delegate authority to the City and County Manager to approve purchase orders for expenditures in excess of \$200,000, including those which may exceed aggregate spend thresholds, up to and not to exceed the appropriated budgeted amounts for the services identified.

Sources and Uses of Funds for Multiple Projects	Amount
Public Works - Water and Utility Supplies Budget Line Item	\$1,285,000
Parks- Battery Powered Landscape Equipment Budget Line Item	\$440,000

Any funding over and above the funding identified in the existing budget will still require future reviews and approvals from the City Council.

Prior Council or Other Entity Actions

March 25, 2025 - Council approved Prior Council Action [Resolution No. 2025-59](#) authorizing the use of master service agreements and delegating purchasing authority to the City and County Manager or her designee for specific vendors' on-call, on demand and emergency expenditures in excess of \$200,000.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve the authorization for the City and County Manager to approve purchase orders up to the approved budget amount for Water and Utility Supplies with Core and Main LP, Rexel USA, Inc., and Battery Powered Landscape Equipment with TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc. the appropriate motion is

That Resolution 2025-118 be adopted.

Alternatives

Do not provide the City and County Manager this delegated authority for Water and Utility Supplies with Core and Main LP, Rexel USA, Inc., and Battery Powered Landscape Equipment with TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc. Staff will continue with the current process of encumbering funding with each contract.

Background

List Of Awarded Master Services Agreements

The following additional solicitation and master service agreements are for budgets whose expenditures are expected to exceed \$200,000.

Solicitation

[24-IFB-PW-012 Essential Equipment & Parts - Water Treatment Plant, Water Recovery, & Utilities](#) on-call, on-demand services for repair and replacement operations associated with essential parts and equipment required for the daily operation of the water treatment plant, water recovery facility, utilities distribution and collection systems.

Awarded To
[Core and Main LP](#)
[Rexel USA, Inc](#)

[25-IFB-PR-001 Battery Powered Landscaping Equipment](#) on-call, on-demand services for the purchase

of battery powered landscaping equipment and related charging infrastructure.

[TNT Fleet Services, Inc. dba High Altitude Equipment
Mac Equipment, Inc.](#)

RESOLUTION NO. 2025-118

A resolution approving authorization for spending under master services agreements for Water and Utility Supplies with Core and Main LP and Rexel USA, Inc., and Battery Powered Landscape Equipment with TNT Fleet Services, Inc. dba High Altitude Equipment and Mac Equipment, Inc.

Recitals.

Whereas, the Procurement Division has worked with the Public Works Department to complete the competitive solicitation of prequalified vendors for water and utility supplies and battery powered landscape equipment, and entered into non-encumbering contracts with the parties identified below; and

Whereas, the aggregate amount of water and utility supplies could each exceed \$200,000 in any given year and City Council desires to delegate authority to the City and County Manager to authorize such expenditures up to the amount of annual budget appropriation for each given service; and

Whereas, the aggregate amount of battery powered landscape equipment will exceed \$200,000 this year due to new state air quality regulations and City Council desires to also delegate authority to the City and County Manager to authorize such expenditures up to the amount of annual budget appropriation in future years, although we anticipate less need for such a large battery powered equipment purchases going forward;

Whereas, Master Service Agreements, which will govern the rights and obligations between the parties, have been entered into with each of these vendors; and

Whereas, the Master Service Agreements do not obligate Broomfield to make any specific payment or service request. The actual encumbrances of funds occur when any on-call, on demand or emergency services are identified and purchase orders are issued under the authority provided by this resolution confirming the work.

Now, therefore, be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The City and County Manager or a designee is authorized to approve expenditures up to the amount indicated in the annual budget appropriation for the following referenced Master Services Agreements:

- A. Master On-Call Construction Agreements for Water and Utility Services with:
 - 1. Core and Main LP
 - 2. Rexel, Inc
- B. Master On-Call Battery Powered Landscape Equipment with:

1. TNT Fleet Services, Inc. dba High Altitude Equipment
2. Mac Equipment, Inc.

Section 2.

The City and County Manager or a designee is authorized to amend and renew the agreements for three additional one-year periods and issue purchase orders up to the amount indicated in the annual budget appropriation for each type of service in each of the next three budget years.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025.

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City and County of Broomfield

City Council Regular Meeting

D. Amendment Three to the Intergovernmental Agreement with Regional Transportation District (RTD) for Local Contribution to Bicycle Shelters

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Consent Items Item: 6D.
Presented By	
Sarah Grant, Transportation Manager	
Community Goals	
☒ Thriving, Diverse, Safe and Welcoming Community	

Overview

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[View Presentation](#)

Resolution No. 2025-110 would approve Amendment No. 3 to the Intergovernmental Agreement (IGA) with Regional Transportation District (RTD) for Local Contribution to Bicycle Shelters. The updates to the IGA reflect the following key changes: Revised Maintenance Responsibilities, Revised Cost-Sharing Terms and Updated Exhibits.

Attachments

[Memo - Amendment No. 3 to the IGA with RTD for Local Contribution to the Bicycle Shelters.pdf](#)

[Resolution 2025-110.pdf](#)

[IGA with CDOT.pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

The US 36 Bike and Ride Shelters project was the top-ranked recommendation from the US 36 First and Final Mile Plan and is supported by the 2020-2023 Transportation Improvement Program (TIP) administered by the Denver Regional Council of Governments (DRCOG).

The City and County of Broomfield entered into an Intergovernmental Agreement (IGA), dated June 12, 2018, with the Regional Transportation District (RTD) to support the design and construction of the first US 36 Bike-n-Ride Shelter in Broomfield, located at US 36 & Broomfield Station Westbound through a combination of federal and local funding and outlined roles and responsibilities related to the operations, marketing, and maintenance of the shelters. This first shelter, owned by RTD, is referred to as the “Original Shelter.”

A 2020 First Amendment to the IGA increased Broomfield’s local match contribution to \$73,000 due to rising construction costs.

The 2023 Amendment No. 2 to the IGA extended the original agreement terms to the three newly constructed shelters, owned by the City and County of Broomfield located at 8010 Transit Way (US 36 & Broomfield, eastbound); 5000 W. Midway Blvd. (US 36 & Flatiron, westbound); and 300 E. Flatiron Crossing Dr. (US 36 & Flatiron, eastbound). Under this amendment, Broomfield agreed to pay RTD \$3,000 annually per shelter for maintenance (includes cleaning, trash, and graffiti removal) and utilities, assume responsibility for security contracts for the Broomfield-owned shelter locations, and manage marketing and operations for all four shelters. Notably, the IGA included a provision that the Annual Maintenance Payment for RTD’s expenditures would be based on actual expenses.

Broomfield and RTD have also entered into three site-specific license agreements, dated April 22, 2022, for the bike shelters located at US 36 & Flatiron Station (Eastbound), US 36 & Flatiron Station (Westbound), and US 36 & Broomfield Station (Eastbound).

On May 1, 2024, RTD sent an invoice for the May 2024-April 2025 term that increased the annual maintenance cost from \$12,000 (\$3,000 per shelter annually) to \$21,200 for the four shelter locations, while decreasing the service frequency from weekly to monthly. Staff made requests to RTD for documentation and justification for the cost increase. RTD provided documentation of an updated agreement with their cleaning service provider in September 2024, signed and dated in August 2024, as the justification for the cost changes. The increased payment, while a surprise due to the large increase, was supported by RTD’s documentation and in accordance with the terms of the signed IGA.

The \$21,200 invoice for 2024 was paid using funds from the Public Works and Transportation operating budgets. However, due to the significant cost increase and reduced service frequency, staff began working with Public Works in January to identify alternative vendors that could provide more cost-effective maintenance services for the shelters.

Staff determined that a contracted vendor could provide monthly maintenance at an annual cost of \$7,020, resulting in an annual savings of approximately \$14,000. After confirming these savings in March of 2025, staff notified RTD of Broomfield’s intent to terminate the cleaning agreement for the term beginning May 1, 2025, which corresponds to when the Annual Maintenance Payments were due under the IGA. Staff then

began working with RTD to amend the IGA and moved forward with the new vendor in May 2025 to ensure adequate maintenance frequency.

Amendment Three, if approved, would be effective as of May 1, 2025, and would update the IGA to reflect the following key changes:

- **Revised Maintenance Responsibilities:**
Broomfield will assume responsibility for monthly cleaning, trash, and graffiti removal for all four Bike Shelters (the original RTD-owned shelter and three additional Broomfield-built shelters), as outlined in the revised Exhibit D.
- **Revised Cost-Sharing Terms:**
Broomfield will no longer make annual maintenance contributions to RTD for the cleaning of the four bike-n-ride shelters. Instead, the City and County of Broomfield Facilities Division will contract directly with a new vendor to provide these services. This amendment terminates direct payments to RTD for the cleaning of the four shelters. Broomfield will continue to make annual payments to RTD to cover security-related operations (wireless data and access control system) at the original shelter at US 36 & Broomfield Station (Westbound). This amount is subject to annual adjustment based on RTD's actual costs. As part of this amendment, the actual cost for this service has been updated to \$1,500 to be paid annually.
- **Updated Exhibits:**
Exhibits B and D of the Original IGA have been deleted and replaced to reflect the revised project overview and maintenance scope of work.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
Public Works Facilities Operations Fund 03-32100-53170 Project code: XFA0000	\$13,580
Annual Shelter Cleaning Payment to the new Maintenance Vendor for all Shelter locations	-\$7,020
Security/Access Control Contract Payment to RTD for US 36 Broomfield Westbound (Original Shelter)	-\$1,500
Security/Access Control Contract Payment by Broomfield for US 36 Broomfield Eastbound, US 36 Flatiron Eastbound, and Westbound	-\$4,173
Projected Balance	\$887

Prior Council or Other Entity Actions

[Resolution No. 2018-104](#) approving the Intergovernmental Agreement between the City and County of Broomfield and RTD for local contribution, maintenance, marketing, and operation of the bicycle shelter, June 12, 2018.

[Resolution No. 2020-89](#) approving the first amendment to the Intergovernmental Agreement with RTD for the first shelter to be located at the westbound Broomfield Station, April 7, 2020.

[Resolution No. 2020-130](#) approving the Intergovernmental Agreement between the City and County of Broomfield and the Colorado Department of Transportation through the 2020-2023 Transportation Improvement Program, for the US 36 Bike and Ride Shelters, May 12, 2020.

[Resolution No. 2021-11](#) approving a consulting agreement by and between the City and County of Broomfield and Otak, Inc. for the Design of the US 36 Bike and Ride Shelters.

[Resolution No. 2023-05](#) approving a construction agreement by and between the City and County of Broomfield and Nicholas Construction for the Construction of the US 36 Bike and Ride Shelters.

[Resolution No. 2023-59](#) approving the second amendment to the Intergovernmental Agreement between the City and County of Broomfield and RTD for local contribution, maintenance, marketing, and operation of the bicycle shelters, May 9, 2023.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve Amendment Three to the IGA with RTD for Local Contribution to the Bicycle Shelters, the appropriate motion is...

That Resolution 2025-110 be adopted.

Alternatives

Not approve Amendment No. 3 to the IGA. The IGA, as currently amended, would remain in effect, resulting in Broomfield paying the increased annual maintenance costs to RTD, which are not currently budgeted.

RESOLUTION NO. 2025-110

Approving Amendment No. 3 to the Intergovernmental Agreement with the Regional
Transportation District for Highway 36 Bicycle Shelters

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The Amendment No. 3 to the Agreement between the Regional Transportation District and the City and County of Broomfield for Local Contributions to the Construction, Maintenance, and Operation of Bicycle Shelters is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign the Amendment, with such technical additions, deletions, and variations as the City and County Attorney may deem necessary and appropriate and not inconsistent with this Resolution. The Office of the City and County Clerk is authorized to attest the Amendment if needed.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

AMENDMENT NO. 3
to AGREEMENT
between
REGIONAL TRANSPORTATION DISTRICT
and
THE CITY AND COUNTY OF BROOMFIELD
for
LOCAL CONTRIBUTION TO THE CONSTRUCTION, MAINTENANCE,
MARKETING, AND OPERATION OF BICYCLE SHELTERS

This AMENDMENT NO. 3 (“Amendment”) to AGREEMENT BETWEEN REGIONAL TRANSPORTATION DISTRICT AND THE CITY AND COUNTY OF BROOMFIELD FOR LOCAL CONTRIBUTION TO THE CONSTRUCTION, MAINTENANCE, MARKETING, AND OPERATION OF BICYCLE SHELTERS, dated October 22, 2018 (as amended, “IGA”), is made by and between the Regional Transportation District, a political subdivision of the State of Colorado organized pursuant to the Regional Transportation District Act, C.R.S. § 32-9-101, *et seq.*, with an address of 1660 Blake St., Denver, Colorado 80202 (“RTD”), and the City and County of Broomfield, a Colorado municipal corporation and county with an address of One DesCombes Dr., Broomfield, Colorado 80020 (“Broomfield”). RTD and Broomfield may also be referred to individually as a “Party” and collectively as the “Parties.” Capitalized terms used but not otherwise defined herein shall have the meanings assigned to them in the IGA.

RECITALS

- A. The Parties entered into the IGA on October 22, 2018, to provide funding assistance for the US 36 Bike-n-Ride Shelter Project (“Project”) using a combination of federal and local funding, as described in the IGA (the “Project IGA”).
- B. The Parties amended the IGA on June 25, 2020 (“Amendment No. 1”), to amend the grant funding and local matching requirements.
- C. The Parties again amended the IGA in 2023 (“Amendment No. 2”) to add additional bike shelter locations to the IGA. The Project IGA, Amendment No. 1, and Amendment No. 2 together shall be referred to collectively as the “Original IGA.”
- D. RTD and Broomfield previously entered into (i) that certain License Agreement for Construction of a Bicycle Shelter at RTD U.S. 36 & Flatiron Station Eastbound 300 E. Flatiron Crossing Dr., dated April 22, 2022 (ii) that certain License Agreement for Construction of a Bicycle Shelter at RTD US 36 & Flatiron Station Westbound 5000 W. Midway Blvd., dated April 22, 2022, and (iii) that certain License Agreement for Construction of a Bicycle Shelter at RTD US 36 & Broomfield Station Eastbound 8010 Transit Way, dated April 22, 2022 (collectively, “Licenses”). The Licenses are

incorporated herein by this reference.

- E. The construction of the bike shelters is complete, and the initial funding grants for the Project have all been expended; as a result, the Parties desire to further clarify the responsibilities with respect to the operation and maintenance of the bike shelters.
- F. Section 9(e) of the IGA provides that no amendment to the IGA shall be made or deemed to have been made unless in writing executed and delivered by the Party to be bound thereby.
- G. As such, RTD and Broomfield now desire to amend the IGA in order to:
 - a. Modify the Bike Shelter Maintenance Scope of Work applicable to each of the Bike Shelters.
 - b. Modify the IGA to reflect the Parties' agreement that Broomfield shall be responsible for the cleaning, marketing, and operations for the Bike Shelters commencing May 1, 2025.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

1. **Recitals.** The recitals set forth above are incorporated herein by this reference.
2. **Defined Terms.** For purposes of this Amendment, and consistent with Amendment No. 2, the term "Original Bike Shelter" shall mean the US 36 & Broomfield Station Westbound at 7880 W. 116th Ave., which is owned by RTD. The Additional Bike Shelters shall mean the additional three bike shelters built by Broomfield and located at (i) 8010 Transit Way (US 36 & Broomfield, eastbound); (ii) 5000 W. Midway Blvd. (US 36 & Flatiron, westbound); and (iii) 300 E. Flatiron Crossing Dr. (US 36 & Flatiron, eastbound) (each, individually, an "Additional Bike Shelter," collectively, the "Additional Bike Shelters." The Additional Bike Shelters, together with the Original Bike Shelter, are hereinafter referred to collectively as the "Bike Shelters."
3. **Attachments.** Exhibits B and D to the Original IGA are hereby deleted in their entirety and replaced with the following attachments attached hereto and incorporated in this Amendment by this reference:
 - a. Attachment 1: Modified Exhibit B – Project Overview
 - b. Attachment 2: Modified Exhibit D – Bike Shelter Maintenance Scope of Work
4. **Effectiveness.** This Amendment shall be effective as of May 1, 2025. To the

extent that existing terms of the Original IGA are not modified by this Amendment, such terms remain unchanged and in full force and effect.

5. Modifications to IGA for Each of the Bike Shelters.

a. Section 2 Local Jurisdiction Obligations.

i. Section 2(a) was previously deleted in its entirety and 2(b) is hereby deleted in its entirety and Section 2(a) and 2(b) are replaced with the following:

2(a) Maintenance. Broomfield shall be responsible for all costs and expenses to maintain and operate the Additional Bike Shelters for so long as they are in operation. In addition, Broomfield will provide cleaning and graffiti removal to all of the Bike Shelters, as outlined in Exhibit D.

2(b) Maintenance Payments. Broomfield agrees to pay RTD the amount of \$1,500 for the wireless data plan and access control mechanism information technology maintenance that is paid directly by RTD at the Original Bike Shelter within thirty (30) days of receipt of an invoice from RTD after the Effective Date of this IGA as a lump sum annual payment ("Annual Payment") for the first year (2025) and Broomfield shall continue to make Annual Payments while the Original Bike Shelter is in operation. However, if actual costs for wireless data plan and access control mechanism information technology maintenance are less than or greater than \$1,500 per year for the Original Bike Shelters, RTD shall adjust the amount of the Annual Payment based on RTD's actual expenditures for the prior year.

[Signature Page(s) Follow]

WHEREFORE, the Parties have executed this Amendment as of the latest date set forth below.

REGIONAL TRANSPORTATION DISTRICT

By: _____
Debra A. Johnson
General Manager and CEO

Date: _____

Approved as to Legal Form for the
Regional Transportation District:

By: _____
Brandon H. Nguyen
Associate General Counsel

**THE CITY AND COUNTY OF
BROOMFIELD, COLORADO**

By: _____
Mayor

Date: _____

ATTEST

City and County Clerk

APPROVED AS TO FORM:

By: _____
City and County Attorney

ATTACHMENT 1

Modified Exhibit B

Modified Exhibit B
Project Overview

Bike-n-Ride Shelter Project Overview

RTD, in partnership with Broomfield, constructed the following secure bicycle shelters:

1. US 36 & Broomfield Station Westbound: 7880 W. 116TH AVE, Broomfield (Original Bike Shelter)
2. US 36 & Broomfield Station Eastbound: 8010 TRANSIT WAY, Broomfield
3. US 36 & Flatiron Station Westbound 5000 W. MIDWAY BLVD, Broomfield
4. US 36 & Flatiron Station Eastbound: 300 E. FLATIRON CROSSING DR, Broomfield

The bicycle shelters will provide a safe and secure location for RTD customers to park their bicycles while using transit.

Grant funding for the Original Bike Shelter was provided by RTD, and grant funding for the Additional Bike Shelters (listed as 2, 3, and 4 above) was provided by the Colorado Department of Transportation, and Broomfield directed the construction of those Additional Bike Shelters.

RTD has agreed that it will:

- Supply, at its own cost, electricity to each of the Bike Shelters; and
- Own and maintain the Original Bike Shelter through its anticipated lifecycle.

Broomfield has agreed that it will:

- Own and maintain the Additional Bike Shelters through their anticipated lifecycle; and
- Provide ongoing scheduled cleaning and graffiti removal for each of the Bike Shelters as more particularly described in **Exhibit D**; and
- Provide marketing and operations of the Bike Shelters.

The cost for capital repairs or any shelter replacement parts, including the access control components, shall be borne by the Party that owns the applicable Bike Shelter, with Broomfield being responsible for the Additional Bike Shelters and RTD responsible for the Original Bike Shelter. Each Party's operations and maintenance responsibilities are further detailed in **Exhibit D**.

ATTACHMENT 2

Modified Exhibit D

Modified Exhibit D

Bike Shelter Maintenance Scope of Work

**BIKE SHELTER
MAINTENANCE
SERVICES**

1. SCOPE OF WORK

Broomfield or its contractor shall be responsible for providing custodial services and graffiti removal at the Bike Shelters described in Exhibit B in accordance with this Exhibit D.

2. SPECIAL SAFETY REQUIREMENTS

All personnel performing work under this IGA must be properly trained on all safety aspects related to this type of work.

3. CUSTODIAL REQUIREMENTS

General Cleaning

- A.** Wipe down interior and exterior of bike shelters during monthly service.
- B.** Remove stains and trash as needed during monthly service.
- C.** Remove trash and debris from within and around the shelter during monthly service.

Pressure Washing

- A.** Pressure washing will be performed as needed. When pressure washing is required, use a high-pressure low volume hot water washer unit capable of producing a minimum 3000 PSI. Water consumption shall be kept to a minimum to prevent wastewater from running into storm sewer drains. Water is not available on site for contractor use. The contractor is to transport water to each location as needed.
- B.** The requirements of the Clean Water Act shall be observed. No additives may be added to pressure washer water that may run into a storm sewer. Absorbent tubes, “socks” shall be used to keep any water from entering the storm sewer drainage system. Guidelines and requirements of the Colorado Department of Public Health and Environment or any other Relevant Authority regarding pressure washing shall be followed at all times.
- C.** Add required disinfectant chemicals to pressure washer water or use a separate pump sprayer to treat urine or foul smelling odors at all areas that are being pressure washed.

Graffiti Removal

- A. Broomfield or its contractor shall be responsible for removing or covering graffiti on the shelter or signage attached to the shelter to the best of their ability.

4. REPAIRS

Structure Repairs and Life Cycle Costs:

The cost for capital repairs or any shelter replacement parts, including the access control mechanism, shall be borne by the Party that owns the applicable Bike Shelter, with Broomfield being responsible for the Additional Bike Shelters and RTD responsible for the Original Bike Shelter.

Each Party shall use commercially reasonable efforts to complete necessary repairs within 2 weeks after notice that such repairs are needed, unless there is a longer lead time to order replacement parts in which case the time will be extended a reasonable length to complete the work. If either party becomes aware of maintenance issues at the Bike Shelters, such party shall make the party responsible for the maintenance aware of such deficiency so that the maintenance item can be addressed.

Automated Access Control Mechanism and Wireless Data Plan:

Automated Access Control Mechanism

As with the overall repairs to the Bike Shelters, each owner of the applicable Bike Shelter shall be responsible for all repairs to the Automated Access Control (AACM) system which will be responded to by each Party's selected vendor providing the AACM hardware.

Each Party shall complete capital repairs and evaluate performance on an as-needed/advised basis to maintain the shelters in working order for the life of the shelters. The Parties shall work cooperatively with each other and other local governments along the corridor if there is a desire to change vendors providing the AACM and Wireless Data Plan at some date in the future.

Wireless Data Plan

Operation of the AACM shall require a wireless data plan. This plan shall be procured and paid for by RTD for the Original Bike Shelter, and Broomfield agrees to pay for such services as part of the operations of the Original Bike Shelter. For purposes of clarity, Broomfield will pay for the wireless data plan for the Additional Bike Shelters directly to the vendor and separately from RTD. If these funds are not provided by Broomfield, RTD is under no obligation to continue paying fees for wireless data for the Original Bike Shelter. The Parties acknowledge and agree that the wireless data plan is the only maintenance, marketing, and operation fee that will be due and payable to RTD by Broomfield; all other costs for the Additional Bike Shelters and items outlined in this Exhibit will be paid for directly by Broomfield.

Broomfield shall provide wireless data plans for the Additional Bike Shelters.



City and County of Broomfield

City Council Regular Meeting

E. Board of Equalization (BOE) Proposed Resolution for Approval of Mutual Agreements for Abatements over \$10,000

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Consent Items Item: 6E.
Presented By	
Jay Yamashita	
Community Goals	

Overview

[View Correspondence](#)

[View Presentation](#)

Staff is requesting that Council, sitting as the Board of Equalization, approve the mutual agreements for abatement/refund of property taxes recommended by the Assessor and agreed upon between the Assessor and the petitioners outlined in the memo. Resolution No. 2025-115-BOE Approval of Mutual Agreement for Abatement over \$10,000

Attachments

[Memo - BOE Approval of mutual agreements for abatements over \\$10,000 - 7_22_2025.pdf](#)

[Resolution 2025-115-BOE - Approval of Mutual Agreements on abatements - 7_22_2025.pdf](#)

[RITE-A-WAY R8873849 Abatement Petition_FINAL.pdf](#)

Summary

[View Correspondence](#)
[View Presentation](#)

Staff is requesting that Council, sitting as the Board of Equalization, approve the mutual agreements for abatement/refund of property taxes recommended by the Assessor and agreed upon between the Assessor and the petitioners outlined below.

The taxpayers identified below have filed abatement petitions alleging that their property has been overvalued or that their tax levy is levied erroneously. The Assessor recommends approval of these mutual agreements resolving the petitions in the amounts indicated.

If the abatement appeals are approved by Council, the Treasurer’s Office will calculate interest owed and send payment to the taxpayer. The Property Tax Administrator must approve all refunds in excess of \$10,000.00. Upon approval of this resolution, the abatements will be sent to the Property Tax Administrator for further review in accordance with C.R.S §39-2-116. If unsatisfied with Council’s action, a taxpayer may appeal further to the State Board of Assessment Appeals.

Financial Considerations

Petitioner	Taxes Abated/Refunded
RITE-A-WAY LLC R8873849	\$46,408.11

Rationale: The property was appealed in 2024 and adjusted by a Board of Assessment Appeals stipulation. The value should be the same for 2023 and 2024 since the value is set using the same data analysis.

Total	\$46,408.11
-------	-------------

Prior Council or Board Of Equalization Actions

N/A

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve the recommendations of the Assessor and approve the mutual agreements, whose terms are agreed upon by the Assessor and the property owner, the appropriate motion is...

That Resolution 2025-115-BOE be adopted.

Alternatives

Council could deny the abatements and reject the mutual agreements, in which case the petitioners are likely to file for further appeals to the State Board of Assessment Appeals.

RESOLUTION NO. 2025-115-BOE

A resolution approving Mutual Agreements on Abatements over \$10,000

Recitals.

Whereas, City Council sits as the Broomfield Board of Equalization; and

Whereas, pursuant to C.R.S. §39-1-113 and 39-10-114, City Council has considered the recommendations of the Assessor relating to the petitions for abatement or refund as submitted by the taxpayers identified below.

Now, therefore, be it resolved by the City Council of the City and County of Broomfield, Colorado sitting as the Board of Equalization:

Section 1.

The findings and mutual agreement between the petitioners and Assessor over \$10,000 listed below are hereby approved:

1. Petitioner Schedule No.: [RITE-A-WAY R8873849](#)

and if the mutual agreements are approved by the Property Tax Administrator, the Treasurer is directed to the abatement of taxes pro rata for all levies applicable to such property, or, in the case of a refund, refund of taxes pro rata by all jurisdictions receiving payment thereof in accordance with state law.

Section 2.

Pursuant to C.R.S. §39-1-113, Council authorizes the assessor to review petitions for abatement or refund and settle by written mutual agreement any such petition for abatement or refund in an amount of ten thousand dollars or less per tract, parcel, or lot of land or per schedule of personal property. This authorization is perpetual until revoked by Council.

Section 3.

This resolution is effective on the date of approval by the City Council of the City and County of Broomfield.

Approved on July 22, 2025

City Council sitting as the Board of Equalization

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

PETITION FOR ABATEMENT OR REFUND OF TAXES

Received 2/11/2025

County: BROOMFIELD

Date Received by Broomfield
(Use Assessor's or Commissioners' Date Stamp)
Assessor Dept.

Section I: Petitioner, please complete Section I only.

Date: FEBRUARY 11, 2025
Month Day Year

Petitioner's Name: RITE-A-WAY LLC

Petitioner's Mailing Address: c/o Licht & Company, Inc 9101 E. Kenyon Avenue, Suite 3900

Denver

Colorado

80237

City or Town

State

Zip Code

SCHEDULE OR PARCEL NUMBER(S)
R8873849

PROPERTY ADDRESS OR LEGAL DESCRIPTION OF PROPERTY
8679 DESTINATION WAY

Petitioner requests an abatement or refund of the appropriate taxes and states that the taxes assessed against the above property for the property tax year 2023 are incorrect for the following reasons: (Briefly describe why the taxes have been levied erroneously or illegally, whether due to erroneous valuation, irregularity in levying, clerical error, or overvaluation. Attach additional sheets if necessary.)

SEE THE ATTACHED APPEAL

Petitioner's estimate of value: \$ 8,820,000 (2023)
Value Year

I declare, under penalty of perjury in the second degree, that this petition, together with any accompanying exhibits or statements, has been prepared or examined by me, and to the best of my knowledge, information, and belief, is true, correct, and complete.

Petitioner's Signature
By [Signature]
Agent's Signature*

Daytime Phone Number ()

Email

Daytime Phone Number (303) 575-9306

Email LC@lichtco.com

*Letter of agency must be attached when petition is submitted by an agent.

If the Board of County Commissioners, pursuant to § 39-10-114(1), C.R.S., or the Property Tax Administrator, pursuant to § 39-2-116, C.R.S., denies the petition for refund or abatement of taxes in whole or in part, the Petitioner may appeal to the Board of Assessment Appeals pursuant to the provisions of § 39-2-125, C.R.S., within thirty days of the entry of any such decision, § 39-10-114.5(1), C.R.S.

Section II:

Assessor's Recommendation

(For Assessor's Use Only)

	Tax Year <u>2023</u>		
	<u>Actual</u>	<u>Assessed</u>	<u>Tax</u>
Original	<u>\$9,770,000</u>	<u>\$2,725,830</u>	<u>\$462,660.56</u>
Corrected	<u>\$8,790,000</u>	<u>\$2,452,410</u>	<u>\$416,252.45</u>
Abate/Refund	<u>\$980,000</u>	<u>\$273,420</u>	<u>\$46,408.11</u>

☒ Assessor recommends approval as outlined above.

If the request for abatement is based upon the grounds of overvaluation, no abatement or refund of taxes shall be made if an objection or protest to such valuation has been filed and a Notice of Determination has been mailed to the taxpayer, § 39-10-114(a)(1)(D), C.R.S.

Tax year: 2023 Protest? ☒ No ☐ Yes (If a protest was filed, please attach a copy of the NOD.)

☐ Assessor recommends denial for the following reason(s):



Assessor's or Deputy Assessor's Signature

FOR ASSESSORS AND COUNTY COMMISSIONERS USE ONLY

(Section III or Section IV must be completed)

Every petition for abatement or refund filed pursuant to § 39-10-114, C.R.S. shall be acted upon pursuant to the provisions of this section by the Board of County Commissioners or the Assessor, as appropriate, within six months of the date of filing such petition, § 39-1-113(1.7), C.R.S.

Section III:**Written Mutual Agreement of Assessor and Petitioner**

(Only for abatements up to \$10,000)

The Commissioners of _____ County authorize the Assessor by Resolution No. _____ to review petitions for abatement or refund and to settle by written mutual agreement any such petition for abatement or refund in an amount of \$10,000 or less per tract, parcel, or lot of land or per schedule of personal property, in accordance with § 39-1-113(1.5), C.R.S.

The Assessor and Petitioner mutually agree to the values and tax abatement/refund of:

	Tax Year <u>2023</u>		
	<u>Actual</u>	<u>Assessed</u>	<u>Tax</u>
Original	<u>\$9,770,000</u>	<u>\$2,725,830</u>	<u>\$462,660.56</u>
Corrected	<u>\$8,790,000</u>	<u>\$2,452,410</u>	<u>\$416,252.45</u>
Abate/Refund	<u>\$980,000</u>	<u>\$273,420</u>	<u>\$46,408.11</u>

Note: The total tax amount does not include accrued interest, penalties, and fees associated with late and/or delinquent tax payments, if applicable. Please contact the County Treasurer for full payment information.

[Signature]
Petitioner's Signature

6-10-2025
Date

[Signature]
Assessor's or Deputy Assessor's Signature

4/5/2025
Date

Section IV:**Decision of the County Commissioners**

(Must be completed if Section III does not apply)

WHEREAS, the County Commissioners of _____ County, State of Colorado, at a duly and lawfully called regular meeting held on ____/____/____, at which meeting there were present the following members:

Month Day Year

with notice of such meeting and an opportunity to be present having been given to the Petitioner and the Assessor of said County and Assessor _____ (being present--not present) and

Name

Petitioner _____ (being present--not present), and WHEREAS, the said

Name

County Commissioners have carefully considered the within petition, and are fully advised in relation thereto, NOW BE IT RESOLVED that the Board (agrees--does not agree) with the recommendation of the Assessor, and that the petition be (approved--approved in part--denied) with an abatement/refund as follows:

Year	Assessed Value	Taxes Abate/Refund
------	----------------	--------------------

Chairperson of the Board of County Commissioners' Signature

I, _____ County Clerk and Ex-Officio Clerk of the Board of County Commissioners in and for the aforementioned county, do hereby certify that the above and foregoing order is truly copied from the record of the proceedings of the Board of County Commissioners.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said County

this _____ day of _____
Month Year

County Clerk's or Deputy County Clerk's Signature

Note: Abatements greater than \$10,000 per schedule, per year, must be submitted in duplicate to the Property Tax Administrator for review.

Section V:**Action of the Property Tax Administrator**

(For all abatements greater than \$10,000)

The action of the Board of County Commissioners, relative to this petition, is hereby

☐ Approved ☐ Approved in part \$ _____ ☐ Denied for the following reason(s):

Secretary's Signature

Property Tax Administrator's Signature

Date



February 11, 2025

Assessor
Broomfield County

Re: Address: 8679 Destination Way
Schedule Number: R8873849

Dear Assessor,

We represent the owner of the above-referenced property. We appeal the 2023 actual value. Your office values the property at **\$9,800,000**. We estimate the actual value to be **\$8,820,000**.

The subject property was stipulated for 2024 at the State Board of Assessment Appeals to a value of \$8,820,000. That stipulation is attached in this petition. Please equalize the 2023 valuation to match the 2024 stipulation.

Chris Barnes is a Colorado licensed appraiser. Other members of our firm are not licensed. The Colorado Appraiser Regulations allow advocacy regarding property tax assessments and appeals. The Code of Colorado Regulations published by the Division of Real Estate requires the following statements be found in a report prepared for a consulting service: A Contingent Fee is being paid; the Licensee is performing a consulting service and not an independent appraisal; the attainment of a stipulated result is not subject to compliance with USPAP.

Please notify us of your decision at:

Licht & Company, LLC.
9101 E. Kenyon Avenue, Suite 3900
Denver, Colorado 80237

Respectfully,

A handwritten signature in black ink, appearing to read 'Adam Licht', is written over a horizontal line.

Adam Licht

BOARD OF ASSESSMENT APPEALS, STATE OF COLORADO 1313 Sherman Street, Room 315 Denver, Colorado 80203	Docket No.: 2024BAA848
Petitioner: RITE-A-WAY LLC v. Respondent: BROOMFIELD COUNTY BOARD OF EQUALIZATION	Schedule No.: R8873849 Tax Year(s): 2024
STIPULATION AND SETTLEMENT	

Petitioner and Respondent, as captioned above (collectively, the “Parties”), hereby stipulate and agree as follows:

1. The subject property is currently classified as Commercial.
2. The actual value of the subject property, commonly known as 8679 Destination Way, for tax year 2024 is as follows:

Schedule No: R8873849	BOE Value	Actual Value
Land	\$1,822,980	\$1,822,980
Improvements	\$7,977,020	\$6,997,020
Personal Property	N/A	N/A
Total	\$9,800,000	\$8,820,000

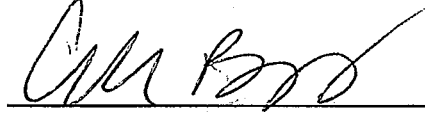
3. The Parties jointly move the Board of Assessment Appeals to enter a final agency order based on this stipulation.

4. The hearing set for May 13, 2025 is no longer necessary and the Parties request it be vacated.

Dated this 10th day of February, 2025.

LICHT AND COMPANY

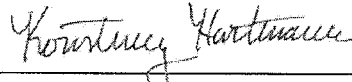
By:



Chris Barnes

REPRESENTATIVE FOR PETITIONER

OFFICE OF THE CITY & COUNTY ATTORNEY
THE CITY AND COUNTY OF BROOMFIELD



Kourtney Hartmann, Reg. #34896
Senior City and County Attorney

ATTORNEY FOR RESPONDENT

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Stipulation and Settlement was e-filed on the BAA Portal this 10th day of February 2025, addressed to the following:

Board of Assessment Appeals
Room 315
1313 Sherman Street
Denver, Colorado 80203
baa@state.co.us

Licht and Company
Chris Barnes
Email: lc@lichtco.com

/s/ Denise Keith

Denise Keith
Legal Administrative Assistant
Broomfield County Board of Equalization

APPOINTMENT OF AGENT

February 29, 2024

Licht & Company, Inc. is authorized to represent RITE-A-WAY LLC in property tax valuation matters for tax years 2023 and 2024. Please contact Licht & Company regarding all property tax issues. The property is indicated below:

8679 Destination Way
Broomfield County Schedule # R8873849

AGENT: Licht & Company, Inc.
9101 E. Kenyon Avenue, Suite 3900
Denver, CO 80237
Phone: (303) 575-9306
Fax: (303) 575-9307

X Sharon Brown
Signature

4/4/24
Date

Name: Sharon Brown

Title: Secretary / Treasurer

Company: RITE-A-WAY LLC

Phone Number: 308-235-4616

State of Nebraska
County of Kimball

ss.

The foregoing instrument was acknowledged before me this 4th day of April, 2024, by

Sharon Brown

WITNESS my hand and official seal

Christine D Berger
Notary Public

GENERAL NOTARY - State of Nebraska
CHRISTINE D. BERGER
My Comm. Exp. March 16, 2025

My commission expires: March 16th 2025



ASSESSOR'S EXHIBIT

Abatement Hearing Summary

Date: 7/22/2025

Schedule Number: R8873849

Owner of Record: Rite-A- Way LLC

Reason for Abatement:

- 2024 BAA Stipulation - \$8,790,000. Both years should have the same actual value.

Remarks by Assessor:

- The subject property is the Comfort Suites Hotel that has a total of 98 rooms and located in the Arista Area.
- Subject property has a very high 2023 mill levy.
- A written mutual agreement has been signed and agreed to by both parties.

Recommendation by Assessor:

Based on our analysis we recommend that the Broomfield Board of Equalization approve the recommended reduction to the subject property for the tax year 2023 resulting in an abatement refund of \$46,408.12

Tax Year 2023	Original Value	Value After Review	Amount Abated	Amount Refunded
Actual	\$9,770,000	\$ 8,790,000	\$ 980,000	
Assessed	\$2,725,830	\$ 2,452,410	\$273,420	\$ 46,408.12

Mill Levy = 169.732



City and County of Broomfield

City Council Regular Meeting

A. Public Hearing Natural Medicine Ordinance - Second Reading

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Action Items Item: 7A.
Presented By	
Branden Roe, Principal Planner	
Community Goals	
☒ Thriving, Diverse, Safe and Welcoming Community	

Overview

[View Correspondence](#) and visit [BroomfieldVoice.com](https://broomfieldvoice.com)
[View Presentation](#)

Coloradans approved Proposition 122 (the Decriminalization, Regulated Distribution, and Therapy Program for Certain Hallucinogenic Plants and Fungi Initiative) on November 8, 2022.

The Colorado General Assembly approved [Senate Bill 23-290](#) (SB23-290) during the 2023 legislative session, and Governor Polis signed the bill into law. SB23-290 replaced applicable sections of the Colorado Revised Statutes which were created by Proposition 122 to create an implementation and regulatory framework.

Proposition 122 and [SB23-290](#) prevent any local jurisdiction from prohibiting natural medicine facilities within their jurisdictional boundaries, but does allow for local jurisdictions to regulate the time, place and manner of these uses and the opportunity to establish local licensing frameworks in addition to state licensing requirements.

Ordinance No. 2270 proposes to amend Title 17, Zoning of the Broomfield Municipal Code, to add time, place and manner regulations related to natural medicine and natural medicine businesses.

Attachments

[Memo - Ordinance No 2270 Natural Medicine Regulations 2nd Reading.pdf](#)

[Ordinance No. 2270 Related to Natural Medicine 2nd Reading.pdf](#)

Summary

[View Correspondence](#) and visit [BroomfieldVoice.com](https://broomfieldvoice.com)
[View Presentation](#)

Staff is bringing forth an ordinance that proposes to amend Title 17, Zoning of the Broomfield Municipal Code, to add time, place, and manner regulations related to natural medicine and natural medicine businesses.

Coloradans approved Proposition 122 (the Decriminalization, Regulated Distribution, and Therapy Program for Certain Hallucinogenic Plants and Fungi Initiative) on November 8, 2022.

The Colorado General Assembly approved [Senate Bill 23-290](#) (SB23-290), the Natural Medicine Health Act of 2022, during the 2023 legislative session, and Governor Polis signed the bill into law. SB23-290 replaced applicable sections of the Colorado Revised Statutes, which were created by Proposition 122 to create an implementation and regulatory framework.

Proposition 122 and [SB23-290](#) prevent any local jurisdiction from prohibiting natural medicine facilities within their jurisdictional boundaries, but does allow for local jurisdictions to regulate the time, place, and manner of these uses and the opportunity to establish local licensing frameworks in addition to state licensing requirements.

A study session was held on [April 29, 2025](#), regarding the proposed framework for local regulations related to natural medicines. This framework did not include time restrictions, as Broomfield does not typically regulate hours of operation of businesses, but did include proposed locational and manner regulations.

If approved, Ordinance No. 2270 would make the following changes to the Broomfield Municipal Code:

- Create locational requirements for natural medicine healing centers, manufacturing, and cultivation facilities.
- Create place and manner regulations for natural medicine healing centers, manufacturing, and cultivation facilities.

Financial Considerations

The amendments proposed by this ordinance will not impact fees or other mechanisms for collecting revenue for the City and County of Broomfield.

Prior Council Action

- [April 29, 2025](#) - A study session was held to discuss a framework for a proposed ordinance to regulate natural medicine and natural medicine businesses in Broomfield.
- [June 10, 2025](#) - Council approved Ordinance No. 2270 related to natural medicine regulations on first reading.

Board and Commissions Prior Actions and Recommendations

N/A

Proposed Actions/Recommendations

If Council desires to make changes to the Broomfield Municipal Code related to natural medicine regulations, the appropriate motion is...

That Ordinance No. 2270 be adopted on second and final reading and ordered published.

Alternatives

Make no changes to the Broomfield Municipal Code.

Make changes to the Broomfield Municipal Code as directed by City Council.

Project Website

<http://www.broomfieldvoice.com/natural-medicine>

How to Submit Public Comments on this Proposal

Email directly to Planning@broomfield.org

Staff Memorandum from the First Reading

The [staff memorandum from the first reading of Ordinance No. 2270](#) on June 10, 2025, includes a detailed discussion of the proposed code changes. There have been no changes to the Ordinance since the first reading.

Ordinance No. 2270

Proposed Ordinance No. 2270 amends Title 17, Zoning of the Broomfield Municipal Code, to add regulations related to natural medicine and natural medicine businesses. If approved on second reading, proposed Ordinance No. 2270 will be published by title and will become effective 7 days after publication.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2270

An ordinance to amend the Broomfield Municipal Code, Title 17, related to Natural Medicine

Recitals.

Whereas, the People of the State of Colorado approved the citizens' initiative known as "Proposition 122: Access to Natural Psychedelic Substances," which was codified in the Colorado Revised Statute Sections 12-170-101 through 115 (the "Natural Medicine Health Act") in 2022; and

Whereas, the Natural Medicine Health Act decriminalized the personal possession, growing, sharing, and use, but not the sale, of five natural medicines, including psychedelic mushrooms (psilocybin and psilocin) and three plant-based psychedelic substances (dimethyltryptamine, ibogaine, and mescaline); and

Whereas, the Natural Medicine Health Act allowed the supervised use of psychedelic mushrooms by individuals aged 21 and over at licensed facilities and requires the state to create a regulatory structure for the operation of those licensed facilities; and

Whereas, the Natural Medicine Health Act allows the state to expand the type of substances that may be used in licensed facilities to include plant-based psychedelic substances (dimethyltryptamine, ibogaine, and mescaline), beginning in 2026; and

Whereas, the State Legislature enacted Senate Bill 23-290, which amended certain sections of the Natural Medicine Health Act and also codified in Colorado Revised Statutes Sections 44-50-101 through 904 (the "Colorado Natural Medicine Code") a regulatory structure for the operation of licensed natural medicine facilities, which includes the licensing and registration of facilities and related businesses that provide for the use, cultivation, manufacture and testing of these substances; and

Whereas, the Natural Medicine Health Act and Colorado Natural Medicine Code prohibit local governments from banning licensed natural medicine facilities, services, and use of natural psychedelic substances permitted by the Natural Medicine Health Act, while allowing local governments to regulate the time, place and manner of operation of such facilities; and

Whereas, the Colorado Natural Medicine Code provides that the "state licensing authority will "not receive or act upon an application for issuance of a natural medicine business license"... "[for] a location in an area where the cultivation, manufacturing, testing,

storage, distribution, transfer, and dispensation of natural medicine or natural medicine product as contemplated is not permitted under the applicable zoning laws of the local jurisdiction;” and

Whereas, the Colorado Natural Medicine Code further provides that the state licensing authority will not receive or act upon an application for the issuance of a natural medicine business license if “the building where natural medicine services are provided is within one thousand feet of a child care center, preschool, elementary, middle, junior, or high school; or a residential child care facility...;” and

Whereas, the City Council desires to enact this ordinance to regulate the time, place and manner of the operation of licenses issued pursuant to the Natural Medicine Health Act and its regulatory structure; to establish the appropriate zoning districts for the operation of licenses issued pursuant to the Colorado Natural Medicine Code; and to establish distance restrictions for natural medicine businesses are in operation or proposed to be in operation within the vicinity of a child care center; preschool, elementary, middle, junior or high school; or residential child care facilities pursuant to the Colorado Natural Medicine Code.

Now, therefore, be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 17-02-110, Natural Medicine, is added to the Broomfield Municipal Code as follows:

17-02-110 - Natural Medicine.

- (A) *Intent.*** It is the purpose of this section to provide regulations implementing Colorado Natural Medicine Health Act and the regulatory structure codified under the Colorado Natural Medicine Code regarding the cultivation, manufacturing, testing, administering, and consuming of natural medicine products.
- (B) *Definitions.*** It is the intent of these regulations that the terms not defined herein shall be the same as those found in the Colorado Natural Medicine Health Act and the Colorado Natural Medicine Code, as such laws, rules, and regulations may be amended from time to time.
 - (1)** Healing center shall have the meaning set forth in the Colorado Natural Medicine Health Act as amended from time to time.
 - (2)** Natural medicine shall have the meaning set forth in the Colorado Natural Medicine Health Act as amended from time to time.
 - (3)** Natural medicine businesses include healing centers, cultivation, manufacturing, and testing facilities, or any other such natural medicine business as defined in the Colorado Natural Medicine Health Act and Colorado Natural Medicine Code, and properly licensed for operation pursuant to Colorado law.

(C) Natural Medicine Businesses

- (1) Natural medicine businesses shall operate in compliance with all applicable state and local regulations and state licensing requirements.**
- (2) Natural medicine businesses are permitted in the following zoning districts:**
 - (i) Natural medicine healing centers are permitted on commercially and all industrially zoned properties, and within zoned planned unit development, mixed-use or transit-oriented development that allow general office uses, or include medical offices or clinics.**
 - (ii) Natural medicine testing facilities are permitted on commercially and all industrially zone properties, and within zoned planned unit development, mixed-use, or transit-oriented development that allow laboratory uses.**
 - (iii) Natural medicine cultivation facilities are permitted on all industrially and all agriculturally zoned properties, and within zoned planned unit development, mixed-use or transit-oriented development that allow light industrial uses.**
 - (iv) Natural medicine product manufacturing is permitted on all industrially zoned properties, and within zoned planned unit development, mixed-use, or transit-oriented development that allows light industrial uses.**
- (3) A natural medicine healing center may be an accessory use to a natural medicine cultivation or manufacturing business in any zone district, allowing natural medicine cultivation or manufacturing businesses.**
- (4) All natural medicine businesses shall be located at least one thousand (1,000) feet away from a child care center, preschool, elementary, middle, or junior high school; and/or a residential child care facility. The distance shall be calculated by direct measurement from the nearest property line of the land used for a school or facility to the nearest property line of the property upon which a natural medicine facility would operate.**
- (5) All natural medicine businesses shall not cause odors, smoke, heat, glare, or light that is detectable to a person of normal senses beyond the property line of the property upon which the natural medicine business is being conducted, or in an adjacent dwelling unit or public area.**
- (6) No natural medicine business shall be operated as a home occupation. Facilitators cannot use their own residence to perform and supervise natural medicine services for a participant. However, facilitators may provide natural medicine services at a participant's residence in compliance with Colorado Revised Statutes.**

Section 2.

This ordinance is effective seven days after publication following final passage.

Introduced and approved after first reading on June 10, 2025, and ordered published in full.

Introduced a second time and approved on July 22, 2025, and ordered published.

City and County of Broomfield, Colorado The

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

City
and County Attorney KKH



City and County of Broomfield

City Council Regular Meeting

B. Broomfield Water Recovery Facility (BWRF) Early Work Guaranteed Maximum Price (GMP) Moltz Construction and Carollo Consulting Agreements Phase 1 and 1b

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Action Items Item: 7B.
Presented By	
Ken Rutt, Director of Public Works	
Community Goals	
☒ Financial Sustainability and Resilience	

Overview

[View Correspondence](#)

[View Presentation](#)

Broomfield's Water Recovery Facility (BWRF) was originally constructed in 1954 with a capacity of 0.8 million gallons per day (MGD). The facility has been expanded five times and now has the capacity to treat a hydraulic flow of 12 million gallons per day and an organic loading of 23,108 lbs per day. Resolution Numbers 2025-12, 2025-13, and 2025-109, if approved, will help ensure Broomfield can prepare for future infrastructure needs, meet pending regulatory changes, and prepare for asset management of existing facilities.

Attachments

[Memo for Broomfield Water Recovery Facility \(BWRF\) Early Work Guaranteed Maximum Price \(GMP\) Moltz Construction and Carollo Consulting Agreements \(1\).pdf](#)

[Resolution No. 2025-12 - Moltz Phase 1.pdf](#)

[Resolution No. 2025-13 - Carollo Phase 1.pdf](#)

[Resolution No. 2025-109 - Carollo Phase 1b.pdf](#)

[Carollo Consulting Agreement WRF Ph 1 ESDC - Carollo signed Rev250709.pdf](#)

[Carollo Consulting Agreement WRF Phase 1B - Carollo signed Rev 250709.pdf](#)

[Broomfield AIA Early Work Package GMP Moltz Sign w Exhibit 1.pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

Background

Broomfield's Water Recovery Facility (BWRF) was originally constructed in 1954 with a capacity of 0.8 million gallons per day (MGD). The facility has been expanded five times and now can treat a hydraulic flow of 12 million gallons per day and an organic loading of 23,108 lbs per day.

The City and County of Broomfield (Broomfield) is the Designated Land-use Management Agency and Wastewater Utility Service Area Management and Operating Agency (DMOA). A municipality that serves as their wastewater collection system and treatment plant's DMOA must be able to design, construct, operate, and maintain waste treatment works and satisfactorily finance these operations by raising sufficient revenues.

In 2023, Council, at the [October 10, 2023](#), meeting, adopted the Wastewater Facility Master Plan, which outlined an original 13 year, \$524 million capital improvement program (CIP). The Wastewater Facility Utility Plan (also referred to as a Master Plan) summarized the current and future regulatory and capacity requirements at the BWRF. The improvements and upgrades were planned to be completed in 5 phases. Key drivers and costs for the phased approach included: capacity, asset renewal, biosolids, reuse, and regulatory requirements. The proposed CIP construction schedule, key considerations, and planning level cost estimates allocate the costs amongst these drivers and are summarized in the table below:

Project Driver	Total Cost	Percent of Total Cost
Capacity	\$87,167,500	17%
Asset Renewal	\$104,055,350	20%
Biosolids	\$92,750,850	18%
Reuse	\$33,348,300	6%
Regulatory	\$206,170,000	39%
Total	\$523,492,000	

In alignment with the Wastewater Facility Master Plant, Council, at the October 24, 2023 Council meeting, approved a consulting agreement with Carollo for engineering services to complete design and construction documents for Phase 1.

The Phase 1 design has been completed, and site application for construction approval from the Colorado Department of Public Health and Environment (CDPHE) has been received. The Phase 1 work is necessary to meet for the preparation of the Phase 2 work and the following CDPHE requirements: (1) initiate engineering and financial planning for expansion whenever the average daily monthly maximum flow or organic loading at the treatment reaches 80 percent of design capacity, and (2) commence construction of the expansion whenever the average daily monthly maximum reaches 95 percent of design capacity.

Pursuant to Colorado Law, C.R.S. 25-8-501 (5 d & e), the permittee is required to commence construction on the wastewater treatment facility expansion whenever the hydraulic (flow) or organic loading reaches ninety-five (95) percent of the treatment capacity or, in the case of a municipality, either commence construction or cease issuance of building permits within such municipality until such construction is commenced.

The population growth projection and water conservation efforts are resulting in a “stronger” wastewater concentration, increasing the organic loading on the treatment facility. The organic treatment capacity is predicted to reach the 95% construction/expansion trigger by 2027, and then exceed the current permitted load of 23,108 ppd in 2030. The hydraulic flow is predicted to reach the 95 percent trigger in 2031. Failure to proceed could lead to building permit moratoriums.

The Phase 1 design includes the following major components:

- Relocation and construction of the Flow Equalization Basin and Pump Station - increase capacity to enhance overall wastewater treatment efficiency, optimizing energy and chemical costs and providing for improved reuse irrigation water supply
- Construction of a fourth primary clarifier
- Enhanced Odor Control treatment
- Aeration Blower Optimization - optimizing energy usage and improved treatment efficiency and
- Upgrades to the existing Reuse Pump Station to increase pumping capacity and meet existing building code requirements.

Due to current funding constraints, Phase 1 of the BWRF project will be executed in two distinct packages:

- Early Work Package (EWP): This package, presented with available 2025 Budget funds, is crucial for procuring key long-lead equipment (e.g., variable frequency drives, pumps, electrical equipment, blowers, generators) and initiating construction. This allows critical work to commence immediately, bridging the period until bond funding can be secured in early 2026.
- Late Work Package (LWP): This package will be presented to Council upon securing the necessary bond funding.

The purpose of the Early Work Package (EWP) in the Broomfield Water Recovery Facility (BWRF) project is to allow for the procurement of key long-lead equipment (variable frequency drives, pumps, electrical equipment, blowers, and generators) and construction funding for the project until bond funding can be secured in early 2026. This approach is necessary due to funding constraints, as Phase 1 of the project is being contracted in two parts (Early Work Package and Late Work Package) to align with available funds in the 2025 Budget.

To ensure project schedule adherence and regulatory compliance, an additional phase (Phase 1b) has been added to the project. Phase 1b will include the work on the Secondary Train, including the development of the new Train 4, originally included in Phase 2. The design and construction will both need to be completed within the 2026 bond funding schedule.

Similarly, the two proposed engineering services agreements will be presented in two parts (Early Work and Late Work) due to funding availability.

Broomfield will be seeking bond funding in early 2026 for the work. Bond funding requires 85 percent of the provided funding be spent within a three-year period. In addition, Broomfield has elected not to acquire additional bond funding until 2032.

Contractor Selection Process

Broomfield issued a competitive request for qualifications (RFQ) for a contractor to serve as the Construction Manager/General Contractor (CM/GC) for the project. The RFQ was open to all interested construction firms. Four Statements of Qualifications were received and the review committee, comprised of the Water Recovery Superintendent, the Director of Water Utilities, Water Recovery team members,

design team and other Broomfield staff, reviewed the qualifications. The firms were interviewed, and staff requested fee proposals. The selection was narrowed to the top two firms. Moltz Construction was selected based on qualifications, previous experience, project approach, and fee. The fees from the top two firms were 7.5 and 8.5, with Moltz having the lower fee.

The CM/GC agreement involves a two-step process:

1. Step One: Preconstruction Services - This authorizes Moltz Construction to perform preconstruction services, which include reviewing design drawings, providing cost estimates, reviewing on-site conditions, reviewing vendor qualifications, and bidding the work. The initial agreement for these services was for \$196,380 and did not require Council authorization.
2. Step Two: Guaranteed Maximum Price (GMP) Approval - This step involves approving the GMP as an amendment to the CM/GC agreement for the actual construction of the project. Staff is currently presenting Amendment One to the Council for the Early Work Package (EWP) to allow for the procurement of key long-lead equipment and construction funding until bond funding can be secured.

Staff is now presenting Amendment One of the CM/GC to Council to allow for the procurement of key long-lead equipment (variable frequency drives, pumps, electrical equipment, blowers, and generators) and construction funding for the project until bonding for the project can be secured.

Engineering Proposals

Staff proposes two engineering services agreements with Carollo Engineering:

- Engineering Services During Construction (ESDC) for Phase 1 of the Early Work Package (Resolution 2025-13).
- Engineering design services for 30 percent of Phase 1b (Resolution 2025-109).

To fully complete both Phase 1 and Phase 1b, amendments to these contracts will be required upon securing the necessary bond financing.

Staff recommends approval of:

- Construction Agreement with Moltz Construction for the Early Work Package - Proposed Resolution No. 2025-12
- Engineering Construction Services with Carollo Engineers - Proposed Resolution No. 2025-13
- Engineering Design Services for 30% design of Phase 1b with Carollo Engineers - Proposed Resolution No. 2025-109

Staff anticipates bringing forward in early 2026 upon securing the necessary bond financing an amendment to the construction agreement with Moltz Construction for funding of the Late Work Package for Phase 1, and an amendment to the professional services engineering agreement to fund the remaining portion of the Phase 1b design services.

The 2025 CIP Budget includes funding for the Phase 1 engineering services.

Financial Considerations

The following table summarizes the financial allocation for the Early Work Package and related services, demonstrating that the project remains within the budgeted amount.

Sources and Uses of Funds	Amount
Fund 1 (45-70610-55200, 23S0045) Wastewater Treatment Reclamation Facility Expansion	\$4,756,641

Sources and Uses of Funds	Amount
Fund 2 (45-70611-55200, 23S0045) Wastewater Treatment Reclamation Facility Expansion	\$16,632,564
Fund 3 Wastewater Treatment Facility - Odor Control Monitoring and Improvements (45-70610-55200, 11E0005)	\$4,041,427
	\$24,430,632
Amendment One to the Construction Agreement with Moltz for the Guaranteed Maximum Price (GMP) for the Early Work Package (EWP) of the WRF, Phase 1 (Proposed Resolution No. 2025-12)	-\$18,000,000
Construction Contingency for the Construction Agreement with Moltz Construction (Proposed Resolution No. 2025-12)	-\$1,800,000
Consulting Agreement with Carollo Engineers, Inc. for Engineering Services During Construction (ESDC) for the EWP of the WRF, Phase 1 (Proposed Resolution No. 2025-13)	-\$1,222,452
Design Contingency for the Consulting Agreement for the ESDC for the EWP of the WRF, Phase 1 (Proposed Resolution No. 2025-13)	-\$122,245
Consulting Agreement with Carollo Engineers, Inc. for Engineering Design Services for Phase 1b of the WRF, Phase 1 (Proposed Resolution No. 2025-109)	-\$2,503,579
Design Contingency for the Consulting Agreement for Design Services for Phase 1b of the WRF, Phase 1 (Proposed Resolution No. 2025-109)	-\$250,358
Construction Agreement with Moltz for Preconstruction Services (encumbered)	-\$196,380
Other Project Expenses: 20-day Letters, Third Party Geotechnical and Material Testing, CDPHE Permitting Fees, etc. - Estimate for EWP	-\$75,000
Projected Balance	\$260,618

Prior Council or Other Entity Actions

- Council approved funding for the Sewer Fund Capital Projects in the [2022 Budget](#).
- Council approved [Resolution No. 2022-118](#) authorizing an agreement for engineering services related to Broomfield's Wastewater Treatment Utility Master Plan.
- Council approved funding for the Sewer Fund Capital Projects in the [2023 Revised Budget](#).
- Council approved funding for the Sewer Fund Capital Projects in the [June 27, 2023](#), Second Amendment to the 2023 City and County of Broomfield Budget for Capital Improvement Projects, Grants, Personnel and Other Operating Requests.
- Council Study Session for the Wastewater Utility Master Plan on [September 19, 2023](#).
- Council approved funding for the [Sewer Fund Capital Projects in the 2024 Budget](#).
- Council approved funding for the [Sewer Fund Capital Projects in the 2025 Budget](#).

Boards and Commissions Prior Actions and Recommendations

The Advisory Committee on Environmental Sustainability discussed a memo and presentation on the Wastewater Master Plan in 2023. ACES did not have a quorum to take action, and the members in attendance did not have concerns with the plan.

Proposed Actions / Recommendations

If Council desires to proceed with the project; the appropriate motion is...

That Resolution 2025-12 be adopted.

That Resolution 2025-13 be adopted.

That Resolution 2025-109 be adopted.

Alternatives

Do not proceed with the project, which will negatively impact Broomfield's ability to prepare for future infrastructure needs, meet pending regulatory changes, and prepare for asset management of existing facilities.

RESOLUTION NO. 2025-12

A resolution Authorizing and Approving the Guaranteed Maximum Price Amendment One to the Construction Agreement with Moltz Construction, Inc. for the Water Recovery Facility, Phase 1 Improvements Early Work Package

Recitals.

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The Guaranteed Maximum Price Amendment to the AIA Document A 133-2019 Standard Form of Agreement between Owner and Construction Manager as Constructor attached hereto by and between the City and County of Broomfield and Moltz Construction, Inc. for the Water Recovery Facility, Phase 1 in the amount of \$18,000,000 is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

The City and County Manager or a designee thereof is authorized to approve change orders in an aggregate amount not to exceed \$1,800,000.

Section 4.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

RESOLUTION NO. 2025-13

A resolution Authorizing and Approving the Consulting Agreement with Carollo Engineering Company, Inc. for Engineering Services During Construction for the Water Recovery Facility, Phase 1, Early Work Package

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The agreement, attached hereto, between the City and County of Broomfield and Carollo Engineering Company, Inc. in the amount of \$1,222,452 is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

The City and County Manager or a designee thereof is authorized to approve change orders in an aggregate amount not to exceed \$122,245.

Section 4.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

RESOLUTION NO. 2025-109

A resolution Authorizing and Approving the Consulting Agreement with Carollo Engineering Company, Inc. for Engineering Design Services for the Water Recovery Facility, Phase 1b, 30 Percent Design

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The agreement, attached hereto, between the City and County of Broomfield and Carollo Engineering Company, Inc. in the amount of \$2,503,579 is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

The City and County Manager or a designee thereof is authorized to approve change orders in an aggregate amount not to exceed \$250,358.

Section 4.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

CONSULTING AGREEMENT BY AND BETWEEN
THE CITY AND COUNTY OF BROOMFIELD AND CAROLLO ENGINEERS, INC.
FOR ENGINEERING SERVICES DURING CONSTRUCTION (ESDC) FOR THE WATER RECOVERY
FACILITY, PHASE 1

1. PARTIES. The parties to this Consulting Agreement (this “Agreement”) are the City and County of Broomfield, a Colorado municipal corporation and county, (the “City”) and Carollo Engineers, Inc., a Delaware corporation (the “Consultant”), collectively, the “Parties,” or individually, a “Party.”
2. RECITALS. The recitals to this Agreement are incorporated herein by this reference as though fully set forth in the body of this Agreement.
 - 2.1. The City desires to obtain engineering services during construction services in connection with the Water Recovery Facility, Phase 1 (the “Project”).
 - 2.2. The Consultant provides professional services and is qualified to perform services required by the City for the Project.
3. TERMS AND CONDITIONS. In consideration of the mutual covenants and promises of the Parties contained herein, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:
 - 3.1. Obligations of the Consultant.
 - 3.1.1. *General*. The Consultant shall consult with, advise, and represent the City as the City requires during the term of this Agreement. The Consultant shall act at the direction of the City employee assigned by the City to the Project as Project Manager. The Consultant shall communicate with the City about the Project only through the Project Manager.
 - 3.1.2. *Basic Services*. The Consultant shall perform the Basic Services described in Exhibit A attached hereto and incorporated by this reference and elsewhere in this Agreement. Fees for Basic Services shall not exceed \$1,222,452 plus any extra services by written change orders not to exceed \$122,245 approved by the City unless the City has approved a Late Work Package or other written amendment to this Agreement.
 - 3.1.3. *Extra Services*. Upon the express, written approval of the City, the Consultant shall perform Extra Services. The Consultant shall charge the City for such Extra Services, if any, in accordance with such terms as the City may agree to in writing.
 - 3.1.4. *Authorization to Proceed*. No work on the Project shall be performed by the Consultant until written Authorization to Proceed has been issued by the City. If the Consultant proceeds with any work prior to receipt of said Authorization, the City is not responsible for payment for such work.

- 3.1.5. *Completion Date.* The Consultant shall complete the services of this Agreement within 18 months following the date of the Authorization to Proceed. Additionally, the Consultant shall meet the midterm milestones outlined in Exhibit A.

3.2. Obligations of the City.

- 3.2.1. *General.* The City shall direct the work and coordinate reviews, approvals, and authorizations of all stages of work. All approvals and authorizations shall be in writing.
- 3.2.2. *Changes in Work.* Any changes with regard to the Consultant's cost, time requirements of performance, or scope of the work must be in writing and approved by the Parties hereto prior to any work or services being performed in contemplation of said change.
- 3.2.3. *Materials and Services to be Furnished by the City.* The City agrees to furnish the Consultant any material in the possession of the City to the extent that such material, in the opinion of the Project Manager, is readily available and will assist the Consultant in performing the work. The Consultant agrees to request such material in advance so as not to jeopardize the work schedule or meeting arrangements. The City shall not unreasonably withhold such material.

3.3. Commencement and Completion.

- 3.3.1. The Consultant shall commence work on the first working day following receipt of a written Authorization to Proceed issued by the City, or such later date as indicated in the Authorization to Proceed.
- 3.3.2. Except as may be agreed upon in writing by the City and the Consultant, the Consultant shall follow the time schedule shown in Exhibit A.
- 3.3.3. If due to Acts of God, public emergency, or acts of a public enemy, it becomes apparent that this Agreement cannot be fully completed within the agreed time, the Consultant shall so notify the City in writing at least thirty days prior to any scheduled completion date, in order that the Consultant and the City may review the work accomplished to date and determine whether to amend this Agreement to provide additional time for completion.

3.4. Payments to Consultant.

- 3.4.1. *Aggregate Limit.* The amount paid by the City to the Consultant under this Agreement will not exceed \$1,222,452, including reimbursables. Any work completed in excess of \$1,222,452 plus any extra services by written change orders not to exceed \$122,245 will not be paid unless the City has approved a Late Work Package or other written amendment to this Agreement.

- 3.4.2. *Billing.* The Consultant shall bill the City monthly for work done in accordance with the terms and conditions of this Agreement, using the pay request form provided by the City.
- 3.4.3. *Payment by City.* The City will pay each bill in full within 30 days of receipt of payment request and supporting documentation. Consultant shall furnish such additional documentation as the City shall reasonably require. Incorrect payments to the Consultant due to omission, error, fraud, or defalcation may be recovered from the Consultant by deduction for subsequent payments due to the Consultant under this Agreement or other contracts between the City and the Consultant.
- 3.4.4. *Inspection of Records.* The Consultant will permit the authorized agents and employees of the City at reasonable hours, to inspect, review, and audit all records of the Consultant related to this project and the work to be performed hereunder.
- 3.5. Termination.
- 3.5.1. *For Cause.* This Agreement may be terminated by either party for a material breach of this Agreement by the other party not caused by any action or omission of the terminating party by giving the other party written notice at least five (5) days in advance of the termination date. The termination notice shall specify in reasonable detail each such material breach.
- 3.5.2. *Without Cause.* In addition to the foregoing, this Agreement may be terminated by the City, in whole or in part, for its convenience and without cause of any nature by written notice to the Consultant. In the event of termination, the Consultant shall incur no additional expenses and shall perform no further services for the City under this Agreement after the date of receipt of the notice of termination, unless otherwise specified by the City. The City shall pay the Consultant for all work satisfactorily performed prior to receipt of the notice of termination and for other services required by the City to be completed prior to termination and satisfactorily performed.
- 3.5.3. *Upon Termination.* In the event of such termination, the Consultant will be paid for all services rendered to the date of termination, and upon such payment, all obligations of the City to Consultant under this Agreement will cease. Furthermore, in the event of such termination, the Consultant shall promptly deliver to the City all drawings, electronic data, computer programs, computer input and output, plans, photographic images, analyses, tests, maps, surveys, and written materials of any kind generated in the performance of this Agreement up to and including the date of termination. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

- 3.5.4. *Dispute Resolution.* A Party seeking to terminate for cause must notify the other Party of its intent and provide written notice specifying the facts supporting any alleged material breach. Within fourteen (14) days after receipt of such notice, the Parties shall meet to resolve the matters described in the written notice. If either Party believes that mediation would assist in resolving the matters described in the written notice, the Parties shall participate in mediation with a mutually acceptable mediator, to be conducted no later than sixty (60) days after receipt of the written notice of intent to terminate for cause. Mediation shall take place in Broomfield, Colorado and the Parties agree to split the costs of mediation.
- 3.6. *Suspension.* Without terminating this Agreement or breaching its obligations hereunder, the City may, at its pleasure, suspend the services of the Consultant hereunder. Such suspension may be accomplished by giving the Consultant written notice one (1) day in advance of the suspension date. Upon receipt of such notice, the Consultant shall cease its work in as efficient a manner as possible so as to keep his total charges to the City for services under the Agreement to the minimum.
- 3.7. *Laws to be Observed.* The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
- 3.8. *Permits and Licenses.* The Consultant shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of its services.
- 3.9. *Patented Devices, Materials, and Processes.* The Consultant shall hold and save harmless the City from any and all claims for infringement, by reason of the use of any patented design, device, material, process, any trademark, or copyright and shall indemnify the City for any costs, attorney's fees, expenses and damages which it might be obligated to pay by reason of infringement, at any time during the prosecution or after completion of the work.

4. INSURANCE AND INDEMNIFICATION.

4.1. Standard of Care.

- 4.1.1. *Professional Liability.* The Consultant shall exercise in its performance of the Basic Services and Extra Services, if any, the standard of care normally exercised by locally recognized consulting organizations engaged in

performing comparable services. The Consultant shall be liable to the City for any loss, damage, or cost incurred by the City for the repair, replacement, or correction of any part of the Project that is deficient or defective as a result of any failure of the Consultant to comply with this standard.

4.1.2. *Indemnification.* The Consultant shall indemnify, defend and hold harmless the City and its agents and employees from and against all claims, damages, losses, and expenses, including, but not limited to, reasonable attorneys' fees, arising out of or resulting from the performance of the Basic Services or Extra Services, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death or injury to or destruction of tangible property (other than the Project itself), including the loss of use resulting therefrom, and (2) is caused by any negligent act or error or omission of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph 4.1.2. Further, this indemnification is intended to comply with and be subject to Section 13-50.5-102 (8), C.R.S. as amended from time to time.

4.1.3. *No Limitation on Claims.* In any and all claims against the City or against any of its agents or employees by any employee of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under subparagraph 4.1.2 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Consultant or any subconsultant under Workers' Compensation Act of Colorado or other employee benefit legislation.

4.2. Insurance.

4.2.1. *Purchase and Maintain Insurance.* In order to assure the City that the Consultant is always capable of fulfilling specified indemnification obligations, Consultant shall purchase and maintain insurance, from an insurer with an AM Best FSR rating of A- or higher, of the kind, in the amounts, and subject to the conditions shown in the Insurance Requirements attached as Exhibit B.

4.2.2. *Coverage.* Said insurance shall be maintained in full force and effect during the term of this Agreement and shall protect the Consultant, its employees, subconsultant, agents and representatives, and the City from claims for damages for personal injury and wrongful death and for damages to property arising in any manner from acts or omissions of the Consultant, its employees, agents or representatives, in the performance of the services covered herein. The insuring company will provide thirty-

day written notice prior to any alteration or cancellation of the above-referenced insurance.

- 4.2.3. *Valuable Papers.* Furthermore, the Consultant shall carry valuable papers insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes or other similar data related to the services covered by this Agreement in the event of their loss or destruction until such time as the final submission by the Consultant has been made and accepted by the City.

5. NOTICE AND AUTHORIZED REPRESENTATIVES. Any notice required or permitted by this Agreement shall be in writing and shall be sufficiently given for all purposes if sent by email to the authorized representative identified below. Such notice shall be deemed to have been given when the email was sent and received. The City may change its representative at any time by notice to the Consultant. The Consultant shall not replace the Consultant Representative unless: (a) the City requests a replacement, or (b) the Consultant terminates the employment of the Consultant Representative and provides a satisfactory substitute. The City must approve a substitute Consultant Representative, and, if no substitute is acceptable, the City may terminate this Agreement. The Parties each designate an authorized representative as follows:

- 5.1. The City designates Ronda Jo Ackerman Alford as the authorized representative of the City under this Agreement. Email address is ralford@broomfield.org.
- 5.2. Consultant designates Jeff Berlin as the authorized representative of the Consultant under this Agreement. Email address is JBerlin@carollo.com.

If the Consultant is alleging that the City is in breach of this Agreement or has violated any term of this Agreement, Legal Notice shall be made by making the notice above with a copy to citycountyattorney@broomfield.org.

6. INDEPENDENT CONTRACTOR. The Consultant is an independent contractor as described in C.R.S. § 8-40-202(2). The Consultant is not entitled to workers' compensation benefits and is obligated to pay federal and state income tax on monies earned pursuant to this Agreement.
7. APPROVAL OF SUBCONTRACTORS AND CONSULTANTS. The Consultant shall not employ any subcontractors or consultants without the prior written approval of the City Representative. Prior to commencing any work, each subcontractor or consultant shall provide the appropriate insurance as required for the Consultant under this Agreement. The Consultant shall be responsible for coordination of the work and the acts and omissions of its agents, employees, subcontractors, consultants and suppliers, and shall bind each to the terms of this Agreement so far as are applicable. This Agreement is voidable by the City if subcontracted by the Consultant without the express written consent of the City.

8. NO THIRD-PARTY BENEFICIARIES. This Agreement is intended to describe the rights and responsibilities only as to the Parties hereto. This Agreement is not intended and shall not be deemed to confer any rights on any person or entity not named as a Party hereto.
9. FINANCIAL OBLIGATIONS OF THE CITY. All financial obligations of the City under this Agreement are subject to appropriation, budgeting, and availability of funds to discharge such obligations. Nothing in this Agreement shall be deemed to pledge the City's credit or faith, directly or indirectly, to the Consultant. If funds for this Agreement are not appropriated and budgeted in any year subsequent to the fiscal year of execution of this Agreement as determined by the City, this Agreement may be terminated by the City upon written notice to the Consultant. The City's fiscal year is currently the calendar year.
10. EXHIBITS. All exhibits referred to in this Agreement are by reference incorporated herein for all purposes.
11. CONFLICTS WITHIN THE CONTRACT DOCUMENTS. In the event that conflicts exist within the terms and conditions of this Agreement and the attached or referenced Agreement documents or exhibits the former shall supersede.
12. INTEGRATION AND AMENDMENT. This Agreement represents the entire agreement between the Parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the Parties. For purposes of clarity, the terms and conditions of any Consultant invoice, Consultant timesheet, or other form, including but not limited to indemnification, limitation of liability, or cancellation fees, shall be void and of no effect against the City notwithstanding any signatures on such form by a City employee. The Consultant's rights and obligations shall be solely governed by the terms and conditions of this Agreement.
13. SEVERABILITY. If any provision of this agreement as applied to either Party or to any circumstance shall be adjudged by a court to be void or unenforceable, the same shall in no way affect any other provision of this Agreement, the application of any such provision in any other circumstances or the validity, or enforceability of the Agreement as a whole.
14. ADDITIONAL DOCUMENTS OR ACTION. The Parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
15. MINOR CHANGES. The Parties executing this Agreement are authorized to make nonsubstantive corrections to this Agreement and attached exhibits, if any, as they consider necessary.

16. DOCUMENTS. All drawings, computer programs, computer input and output, analyses, plans, photographic images, tests, maps, surveys, electronic files, and written material of any kind generated in the performance of this Agreement or developed by the Consultant specifically for the Project are and shall remain the exclusive property of the City. The Consultant shall not provide copies of any such material to any other party without the prior written consent of the City.
17. RECORDS RETENTION. The Consultant shall maintain complete and accurate records of time spent and materials used for performance of the Work, together with any invoices, time cards, or other supporting data reasonably requested. All records, data and documentation shall be retained by the Consultant for a period of not less than three (3) years after completion of the Work, and shall be subject to review, inspection and copying by the City upon reasonable notice.
18. OFFICIALS NOT TO BENEFIT. No elected or employed member of City government shall directly or indirectly be paid or receive any share or part of this Agreement or any benefit that may arise therefrom. The Contractor warrants that it has not retained any entity or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Agreement.
19. ASSIGNMENT. This Agreement shall not be assigned by the other Party without the prior written consent of the City.
20. BINDING EFFECT. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective legal representatives, successors, heirs, and assigns, provided that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.
21. DAYS. If the day for any performance or event provided for herein is a Saturday, a Sunday, a day on which national banks are not open for the regular transactions of business, or a legal holiday pursuant to C.R.S. § 24-11-101(1), such day shall be extended until the next day on which such banks and state offices are open for the transaction of business.
22. DELAYS. Any delays in or failure of performance by any Party of its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such Party.

23. NO PRESUMPTION. The Parties to this Agreement and their attorneys have had a full opportunity to review and participate in the drafting of the final form of this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction against the Party causing the Agreement to be drafted.
24. GOOD FAITH OF PARTIES. In the performance of this Agreement or in considering any requested approval, acceptance, or extension of time, the Parties agree that each will act in good faith and will not act unreasonably, arbitrarily, capriciously, or unreasonably withhold, condition, or delay any approval, acceptance, or extension of time required or requested pursuant to this Agreement.
25. WAIVER OF BREACH. This Agreement or any of its provisions may not be waived except in writing by a Party's authorized representative. A waiver by any Party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either Party.
26. GOVERNING LAW. This Agreement shall be governed by the laws of the State of Colorado. Any claims or litigation arising under this Agreement will be brought by the Parties solely in the District Court, Broomfield County, Colorado.
27. SURVIVAL OF OBLIGATIONS. The obligations contained in this Agreement that are not fully performed as of termination shall survive termination and shall continue to bind the Parties until fully performed.
28. LAWS TO BE OBSERVED. The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
29. EXECUTION; ELECTRONIC SIGNATURES. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument. This Agreement shall not be binding upon any Party hereto unless and until the Parties have executed this Agreement. The Parties approve the use of electronic signatures for execution of this Agreement. All documents must be properly notarized, if applicable.

This Agreement is executed by the Parties hereto in their respective names as of _____, 2025.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

Mayor

ATTEST:

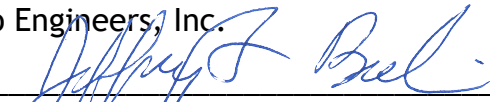
City and County Clerk

APPROVED AS TO FORM:

City and County Attorney

CONSULTANT:

Carollo Engineers, Inc.

By: 

Name: Jeffrey S. Berlin

Vice President

Address: 11030 Circle Point Road

Suite 400

Westminster, CO 80020



Becky J. Luna

Senior Vice President

Attachment A

Duties of Senior Construction Manager & Inspector

The Senior Construction Manager (SCM) and Inspector will work in conjunction as the Engineer's representative at the Site and will act as directed by and under the supervision of the Engineer and will confer with Engineer regarding SCM's and Inspector's actions.

1. General: SCM's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. SCM's dealings with Subcontractors shall only be through or with the full knowledge and approval of the Contractor. SCM shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings. Prepare and circulate weekly progress meeting minutes.
4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which SCM believes that the submittal has not been approved by Engineer.
7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with SCM's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
 - a. Conduct daily on-site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever SCM believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of

that part of work in progress that SCM believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. Inspections, Tests, and System Start-ups:

- a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

- a. Prepare a daily report of weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

12. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

The SCM/Inspector shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items)
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.

5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

Attachment B

**CAROLLO ENGINEERS, INC.
FEE SCHEDULE
CITY AND COUNTY OF BROOMFIELD**

Through December 2026

	<u>Hourly Rate</u>
Engineers/Scientists	
Engineering Intern	\$75.00
Assistant Professional I	150.00
Assistant Professional II	175.00
Professional	199.00
Project Professional	230.00
Senior Professional	260.00
Senior Specialist	290.00
Technicians	
Technician I	135.00
Technician II	175.00
Senior Technician	220.00
Construction Management Services	
Senior Construction Manager	270.00
Resident Project Representative	225.00
Senior Inspector	200.00
Inspector	170.00
Support Staff	
Document Processing / Clerical	145.00
Project Equipment Communication Expense (PECE) Per DL Hour	16.00
Other Direct Expenses	
Travel and Subsistence	at cost
Mileage	At applicable IRS reimbursement rate
Subconsultant	cost + 10%
Other Direct Cost	at cost
Expert Witness	Rate x 2.0

This fee schedule is subject to annual revisions due to labor adjustments.

EXHIBIT A

Basic Services - Broomfield Water Reclamation Facility (BWRF), Phase 1 Improvements

Task No. 1 – Phase 1 Improvements – Construction Administration (Construction Management and Engineering Services During Construction)

CONSULTANT'S SERVICES

The following tasks will be provided as part of the construction phase services in this Task Order No. 1. Note that some tasks include a percentage of the work approved in this contract with further work to be approved in a subsequent contract.

TASK 4 – PROJECT MANAGEMENT

Subtask 410 – Project Coordination and Progress Reporting. The Consultant will prepare and submit monthly progress reports with invoices for the work completed in the last monthly period and compare earned value to actual expenditures for the month and project duration. Invoices shall be in accordance with the Agreement Between City and Consultant. The status reports will also identify or forecast proposed modifications to the project scope. A total of thirty (30) monthly reports are anticipated for this phase of work. 35% of the total project effort is included in this contract.

Consultant shall provide administrative guidance and supervision of staff, including project planning.

Subtask 420 – Conformed Documents. Consultant will prepare and deliver conformed drawings and specifications including changes from permitting review and GMP development. Three (3) 11x17 half-size drawings and two (2) full-size conformed drawing sets will be provided along with two (2) sets of conformed specifications. Electronic PDF files will also be provided.

Subtask 420 – Construction Management Software Setup and Training. Consultant will setup project on the Autodesk Build site for construction document management. Consultant will arrange for and deliver a two-hour training session for Owner and Contractor personnel on the system.

TASK 6 – CONSTRUCTION PHASE SERVICES

Subtask 610 – Meetings - Consultant shall participate in weekly project progress meetings over the thirty (30) month project meeting duration for a total of approximately 120 project progress meetings. Each project progress meeting is anticipated to be one (1) hour in duration. Consultant shall prepare the agenda and provide meeting minutes. Each project progress meeting shall be attended in person by the Senior Construction Manager, Inspector and either the Project Manager, Project Engineer, or Discipline Engineer. Members of the Consultant team may attend by phone as appropriate. Senior Construction Manager will take and distribute minutes. 35% of the total project effort is included in this contract.

Subtask 620 – Senior Construction Manager and Inspection Services. One full-time Inspector shall be provided on site five (5) eight (8) hour days a week during the active construction period of twenty-five (25) months. A Senior Construction Manager (SCM) shall be provided on-site twenty-eight (28) hours per week during the active construction period of twenty five (25) months. A SCM will also be on site part time (twenty (20) hours per week) during the additional five (5) months of initial start of construction and during close out activities of the project. A part-time Electrical Inspector will also be

provided to supplement Senior Construction Manager (SCM) during electrical activities periodically during the active construction at a total of five hundred (500) hours. The Inspector will be the Consultant's representative at the Site, will act as directed by and under the supervision of Consultant, and will confer with Consultant regarding Inspector's actions. Duties of the SCM and Inspector are provided in Attachment A. 30% of the total project effort is included in this contract.

Subtask 625 – Discipline Engineer Site Visits and Inspections - Discipline Engineer site visits shall be provided throughout the active construction period with approximately seventy (70) four (4) hour visits being performed during the project. 35% of the total project effort is included in this contract.

Subtask 630 – Requests for Information. Consultant shall provide up to one-hundred and sixty (160) interpretations and clarifications of contract documents. Consultant anticipates that each interpretation and clarification will require up to four (4) hours to research, respond, and document. It is assumed that RFIs will be managed in Autodesk Build. 35% of the total project effort is included in this contract.

Subtask 640 – Change Orders and Field Orders. Consultant anticipates a total of twenty (20) change orders and ten (10) field orders. Consultant anticipates that each change order and field order will require up to twelve (12) hours to research, prepare engineering, estimate costs, respond, document, and administer. It is assumed that change orders and field orders will be managed in Autodesk Build and Bluebeam Studio. 25% of the total project effort is included in this contract.

Subtask 650 – Shop Drawing Submittals. Consultant anticipates a review of four hundred (400) shop drawing submittals. It is assumed that fifty percent of those shop drawings will require a resubmittal. Consultant anticipates initial submittal reviews will require an average of eight (8) hours and resubmittals an average of two (2) hours to receive, process, review, verify, respond, document, and return. It is assumed that shop drawings will be managed in Autodesk Build and will be submitted by the Contractor in accordance with the Project Specifications. 60% of the total project effort is included in this contract.

Subtask 660 – Coordinate MOPs to Maintain Operations. Consultant shall review Contractor submitted MOPs and coordination with Broomfield Operations in order to maintain operation of affected treatment processes and equipment during construction. MOP coordination is assumed to take a total of two hundred and four (204) hours over the course of the project. 15% of the total project effort is included in this contract.

Subtask 670 – Coordination with Integrator. Consultant will consult and coordinate with Contractor's integrator and programming team regarding functional design intent of major unit processes and mechanical systems. Effort may include revision and refinement of control descriptions and establishment of setpoint ranges. This task does not include any SCADA or PLC programming, screen development, or control systems testing, which shall be the responsibility of the Contractor's integrator. Integrator coordination is assumed to take a total of one hundred eighty four (184) hours over the course of the project. 15% of the total project effort is included in this contract.

ASSUMPTIONS

- Total project duration is thirty (30) months from Contractor Notice to Proceed through Final Completion. Active construction duration is twenty-five (25) months within this period.
- Carollo's Inspector will be on site five (5) days a week, eight (8) hours a day while the Senior Construction Manager shall be on site twenty-eight (28) hours a week during the twenty-five (25) month active construction duration.
- Some tasks include a percentage of the work and duration approved in this contract with further work to be approved in a subsequent contract.

PROJECT DELIVERABLES

Deliverables for this task order include the following:

- Monthly Progress Reports and Invoices, PDF files.
- Weekly Progress Meeting agendas and meeting minutes, PDF files.
- Confirmed Documents: Three (3) 11x17 half-size drawings and two (2) full-size conformed drawing sets will be provided along with two (2) sets of conformed specifications. Electronic PDF files will also be provided.
- Daily construction reports, submitted through Autodesk Build.
- Field memorandums as needed; PDF files.

TIME OF PERFORMANCE

Consultant shall complete all services identified in this Task Order No. 1 within thirty-six (36) months from Construction Notice to Proceed, pending construction and project closeout delays.

PAYMENT

Consultant will perform the Scope of Services described in the above tasks for a not-to-exceed amount of \$1,222,452. The cost will be billed per Fee Schedule provided in Attachment B.

The Consultant shall bill the Owner monthly, indicating the services performed and the cost of such services according to the attached fee schedule.

Task	Description	Project Manager/Senior Specialist	Senior Professional	Project Professional	Assistant Professional	Assistant Professional II	Senior Construction Manager	Resident Project Representative	Senior Inspector	Inspector	Senior Technician	Technician II	Technician I	Document Processing	Carollo Hours	Carollo Labor Cost	Subconsultants	Project Equipment/Communication Expenses (PECE)	Carollo ODCs	Total Engineering Cost
		\$ 290	\$ 260	\$ 230	\$ 190	\$ 175	\$ 150	\$ 270	\$ 225	\$ 200	\$ 130	\$ 220	\$ 175	\$ 135	\$ 145			\$16.00		
4	Project Management																			
410	Project Coordination and Progress Reporting	7	16					6							26	\$ 7,185		\$ 454		\$ 7,618
420	Confirmed Documents		24					12				40	40	40	16	\$ 37,680		\$ 3,072	\$ 1,000	\$ 41,752
430	Construction Management Software Setup and Training		8				8	16							32	\$ 7,360		\$ 512		\$ 7,872
	Subtotal Task 4 Hours	7	0	48	0	0	8	64	0	0	0	40	40	40	16	262				
	Subtotal Task 4 Costs	\$ 2,030	\$ 0	\$ 19,863	\$ 0	\$ 0	\$ 1,200	\$ 14,472	\$ 0	\$ 0	\$ 0	\$ 8,800	\$ 7,000	\$ 5,400	\$ 2,320	\$ 52,205	\$ -	\$ 4,938	\$ 1,000	\$ 87,242
6	Construction Phase Services																			
610	Meetings	21	42					63							126	\$ 32,790		\$ 2,016		\$ 34,776
620	Construction Manager and Inspection Services	0						1032	150		1250				2,472	\$ 631,690	\$ 7,000	\$ 59,552	\$ 6,090	\$ 685,282
630	Discipline Engineer, Site Visits and Inspections	14	14	35	35			98							98	\$ 22,716		\$ 1,568	\$ 350	\$ 24,633
640	Requests For Information	14	7	42	35	56	70								224	\$ 42,862		\$ 3,584		\$ 46,380
650	Change Orders and Field Orders	5	5	10	10	20	20					20			90	\$ 17,940		\$ 1,440		\$ 19,380
660	Shop Drawing Submittal Review	48	24	360	360	648	720								2,160	\$ 398,000	\$ 9,000	\$ 34,560		\$ 440,460
690	Coordinate MEPs to Maintain Operations	6	3	9	3	4	6								31	\$ 67,117		\$ 480		\$ 7,207
670	Coordination with Integrator	2	6	13	3	6									28	\$ 6,342		\$ 442		\$ 6,784
	Subtotal Task 6 Hours	110	89	511	443	734	816	1,096	150	0	1,290	20	0	0	5,228	\$ 1,056,969	\$ 16,500	\$ 83,631	\$ 6,440	\$ 1,165,210
	Subtotal Task 6 Costs	\$ 32,016	\$ 15,340	\$ 117,615	\$ 88,167	\$ 128,380	\$ 122,400	\$ 295,630	\$ 33,780	\$ -	\$ 219,360	\$ 4,400	\$ -	\$ -	\$ -	\$ 1,056,969	\$ 16,500	\$ 83,631	\$ 6,440	\$ 1,165,210
7	Post Construction Services																			
710	Record Drawings	0	0	0	0	0	0				0	0	0	0	0	\$ -	\$ -	\$ -	\$ -	\$ -
720	Commissioning, O&M Manual, and Training	0	0	0	0	0	0				0	0	0	0	0	\$ -	\$ -	\$ -	\$ -	\$ -
730	Closeout and Warranty Followup	0	0	0	0	0	0				0	0	0	0	0	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal Task 7 Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal Task 7 Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Project Hours	117	89	559	443	734	824	1,149	150	0	1,290	60	40	40	16	5,481				
	Total Direct Labor Dollars	\$ 34,046	\$ 15,340	\$ 128,559	\$ 88,167	\$ 128,380	\$ 123,600	\$ 316,122	\$ 33,780	\$ -	\$ 219,360	\$ 13,200	\$ 7,000	\$ 5,400	\$ 2,320	\$ 1,105,174	\$ 16,500	\$ 87,689	\$ 7,440	\$ 1,222,452

EXHIBIT B

INSURANCE REQUIREMENTS

City and County of Broomfield Insurance Requirements Including General Liability, Automobile, Workers' Compensation, and Professional Liability

General Requirements (Version dated December 2024)

1. All insurers shall be licensed or approved to do business within the State of Colorado.
2. Contractor/Vendor's insurance carriers shall have an A.M. Best Company rating of at least A- Class VII.
3. Additional Insured. City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, umbrella liability, excess liability, and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations).
4. Primacy of Coverage. Coverage required of Contractors and Subcontractors shall be primary and non-contributory to any insurance carried by the City and County of Broomfield.
5. All subcontractors must meet the same insurance requirements for the Contract or Purchase Order unless Risk Management has approved a deviation.
6. Subrogation Waiver. All insurance policies required under this Contract maintained by Contractor or its Subcontractors shall waive all rights of recovery against City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield.
7. Cancellation, Change in Coverage or Limits. The above insurance policies shall include provisions preventing cancellation, non-renewal, or reduction in coverage or limits of any insurance, without at least 30 days prior notice to Contractor/Vendor and Contractor/Vendor shall forward such notice to within seven days of receipt of such notice.
8. Certificates. Contractor and all Subcontractors shall provide certificates showing insurance coverage required hereunder to the City and County of Broomfield within 5 days of:
 - a. the effective date of the Contract
 - b. the expiration date of any coverage
 - c. a request by the City and County of Broomfield
9. Separation of Insureds. All insurance policies shall include coverage for cross liability and contain a "Separation of Insureds" provision in the general liability policy.
10. City and County of Broomfield in no way warrants that the limits required herein are sufficient to protect the Contractor/Vendor from liabilities that may arise out of the performance of the work under this Contract by the Contractor, its agents, representative, employees or subcontractors. The Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration or type.
11. All parties understand and agree that the City and County of Broomfield is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations, immunities, protections or any other rights provided by the Colorado Governmental Immunity Act.
12. The City and County of Broomfield reserves the right to negotiate additional specific insurance requirements at the time of the Contract.

13. The City and County of Broomfield and Contractor shall cooperate with each other in the collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery.

Insurance Requirements

The Vendor/Contractor/Subcontractor shall obtain and maintain, at its own expense, and for the duration of the Agreement including any warranty periods under which the Agreement are satisfied, the following:

Commercial General Liability

Commercial General Liability insurance covering all operations by or on behalf of the contractor/vendor on an occurrence basis against claims for bodily injury, property damage (including loss of use), advertising liability, products and completed operations, and contractual liability. For contracts involving vendor/contractor contact with minors or at risk adults, Sexual Abuse and Misconduct Coverage should be included in the coverage requirements and listed on the certificate.

Minimum limits:

- \$1,000,000 Each Occurrence
- \$2,000,000 General Aggregate (per project aggregate for construction contracts)
- \$2,000,000 Products/Completed Operations Aggregate (for construction projects, this coverage should be maintained for a minimum of 3 years from the end of the project)

Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired, and non-owned autos).

Minimum limits:

- \$1,000,000 each accident combined single limit
- If hazardous materials are transported, an MCS 90 form shall be included on the policy

Workers' Compensation

Workers' Compensation Insurance as required by State statute, covering all Vendors/Contractors employees acting within the course and scope of their employment. This requirement shall not apply when a contractor or subcontractor is exempt under the Colorado Workers' Compensation Act and when such contractor or subcontractor provides an appropriate sole proprietor letter.

Employer's Liability with minimum limits:

- \$100,000 Each Accident
- \$100,000 Each Employee by Disease
- \$500,000 Disease Aggregate

Professional Liability

Contractor/Vendor will purchase and maintain professional liability insurance covering any damages caused by an error, omission or negligent professional act to include the following coverages:

- Limited Contractual Liability
- If coverage is Claims Made, a retroactive date prior to the inception of the work
- If coverage is Claims Made, similar coverage must be maintained for three years following the completion of the work or an extended reporting period of 36 months must be purchased

Minimum Limits:

- \$1,000,000 Per Claim
-
- \$2,000,000 General Aggregate

Deviations

Any deviations below the standards given above must be approved by the City and County of Broomfield's Risk Management office. Please direct any questions to RiskManagement@broomfield.org.

Certificate Holder/Certificate of Insurance (COI)

On all Certificates of Insurance the following shall be named an Additional Insured and included on the Certificate provided:

The City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, Umbrella Liability, Excess Liability, and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations). A Waiver of Subrogation is provided in favor of the Additional Insureds as respects to all policies.

City and County of Broomfield
One DesCombes Drive
Broomfield, CO 80020-2495
certificates@broomfield.org

CONSULTING AGREEMENT BY AND BETWEEN
THE CITY AND COUNTY OF BROOMFIELD AND CAROLLO ENGINEERS, INC.
FOR THE WATER RECOVERY FACILITY, PHASE 1B 30% DESIGN

1. PARTIES. The parties to this Consulting Agreement (this “Agreement”) are the City and County of Broomfield, a Colorado municipal corporation and county, (the “City”) and Carollo Engineers, Inc., a Delaware corporation (the “Consultant”), collectively, the “Parties,” or individually, a “Party.”
2. RECITALS. The recitals to this Agreement are incorporated herein by this reference as though fully set forth in the body of this Agreement.
 - 2.1. The City desires to obtain consulting services in connection with the Water Recovery Facility, Phase 1B 30% Design (the “Project”).
 - 2.2. The Consultant provides professional services and is qualified to perform services required by the City for the Project.
3. TERMS AND CONDITIONS. In consideration of the mutual covenants and promises of the Parties contained herein, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:
 - 3.1. Obligations of the Consultant.
 - 3.1.1. *General*. The Consultant shall consult with, advise, and represent the City as the City requires during the term of this Agreement. The Consultant shall act at the direction of the City employee assigned by the City to the Project as Project Manager. The Consultant shall communicate with the City about the Project only through the Project Manager.
 - 3.1.2. *Basic Services*. The Consultant shall perform the Basic Services described in Exhibit A, attached hereto and incorporated by this reference and elsewhere in this Agreement.
 - 3.1.3. *Extra Services*. Upon the express, written approval of the City, the Consultant shall perform Extra Services. The Consultant shall charge the City for such Extra Services, if any, in accordance with such terms as the City may agree to in writing.
 - 3.1.4. *Authorization to Proceed*. No work on the Project shall be performed by the Consultant until written Authorization to Proceed has been issued by the City. If the Consultant proceeds with any work prior to receipt of said Authorization, the City is not responsible for payment for such work.
 - 3.1.5. *Completion Date*. The Consultant shall complete the services of this Agreement within 12 months following the date of the Authorization to Proceed. Additionally, the Consultant shall meet the midterm milestones outlined in Exhibit A.

3.2. Obligations of the City.

- 3.2.1. *General.* The City shall direct the work and coordinate reviews, approvals, and authorizations of all stages of work. All approvals and authorizations shall be in writing.
- 3.2.2. *Changes in Work.* Any changes with regard to the Consultant's cost, time requirements of performance, or scope of the work must be in writing and approved by the Parties hereto prior to any work or services being performed in contemplation of said change.
- 3.2.3. *Materials and Services to be Furnished by the City.* The City agrees to furnish the Consultant any material in the possession of the City to the extent that such material, in the opinion of the Project Manager, is readily available and will assist the Consultant in performing the work. The Consultant agrees to request such material in advance so as not to jeopardize the work schedule or meeting arrangements. The City shall not unreasonably withhold such material.

3.3. Commencement and Completion.

- 3.3.1. The Consultant shall commence work on the first working day following receipt of a written Authorization to Proceed issued by the City, or such later date as indicated in the Authorization to Proceed.
- 3.3.2. Except as may be agreed upon in writing by the City and the Consultant, the Consultant shall follow the time schedule shown in Exhibit A.
- 3.3.3. If due to Acts of God, public emergency, or acts of a public enemy, it becomes apparent that this Agreement cannot be fully completed within the agreed time, the Consultant shall so notify the City in writing at least thirty days prior to any scheduled completion date, in order that the Consultant and the City may review the work accomplished to date and determine whether to amend this Agreement to provide additional time for completion.

3.4. Payments to Consultant.

- 3.4.1. *Aggregate Limit.* Unless extra services are approved in writing, the amount paid by the City to the Consultant under this Agreement will not exceed \$2,503,579 including reimbursables. The Consultant will complete the Work for the amount shown.
- 3.4.2. *Billing.* The Consultant shall bill the City monthly for work done in accordance with the terms and conditions of this Agreement, using the pay request form provided by the City.
- 3.4.3. *Payment by City.* The City will pay each bill in full within 30 days of receipt of payment request and supporting documentation. Consultant

shall furnish such additional documentation as the City shall reasonably require. Incorrect payments to the Consultant due to omission, error, fraud, or defalcation may be recovered from the Consultant by deduction for subsequent payments due to the Consultant under this Agreement or other contracts between the City and the Consultant.

- 3.4.4. *Inspection of Records.* The Consultant will permit the authorized agents and employees of the City at reasonable hours, to inspect, review, and audit all records of the Consultant related to this project and the work to be performed hereunder.

3.5. Termination.

- 3.5.1. *For Cause.* This Agreement may be terminated by either party for a material breach of this Agreement by the other party not caused by any action or omission of the terminating party by giving the other party written notice at least five (5) days in advance of the termination date. The termination notice shall specify in reasonable detail each such material breach.
- 3.5.2. *Without Cause.* In addition to the foregoing, this Agreement may be terminated by the City, in whole or in part, for its convenience and without cause of any nature by written notice to the Consultant. In the event of termination, the Consultant shall incur no additional expenses and shall perform no further services for the City under this Agreement after the date of receipt of the notice of termination, unless otherwise specified by the City. The City shall pay the Consultant for all work satisfactorily performed prior to receipt of the notice of termination and for other services required by the City to be completed prior to termination and satisfactorily performed.
- 3.5.3. *Upon Termination.* In the event of such termination, the Consultant will be paid for all services rendered to the date of termination, and upon such payment, all obligations of the City to Consultant under this Agreement will cease. Furthermore, in the event of such termination, the Consultant shall promptly deliver to the City all drawings, electronic data, computer programs, computer input and output, plans, photographic images, analyses, tests, maps, surveys, and written materials of any kind generated in the performance of this Agreement up to and including the date of termination. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.
- 3.5.4. *Dispute Resolution.* A Party seeking to terminate for cause must notify the other Party of its intent and provide written notice specifying the facts supporting any alleged material breach. Within fourteen (14) days after receipt of such notice, the Parties shall meet to resolve the matters described in the written notice. If either Party believes that mediation would assist in resolving the matters described in the written notice, the

Parties shall participate in mediation with a mutually acceptable mediator, to be conducted no later than sixty (60) days after receipt of the written notice of intent to terminate for cause. Mediation shall take place in Broomfield, Colorado and the Parties agree to split the costs of mediation.

- 3.6. Suspension. Without terminating this Agreement or breaching its obligations hereunder, the City may, at its pleasure, suspend the services of the Consultant hereunder. Such suspension may be accomplished by giving the Consultant written notice one (1) day in advance of the suspension date. Upon receipt of such notice, the Consultant shall cease its work in as efficient a manner as possible so as to keep his total charges to the City for services under the Agreement to the minimum.
- 3.7. Laws to be Observed. The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
- 3.8. Permits and Licenses. The Consultant shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of its services.
- 3.9. Patented Devices, Materials, and Processes. The Consultant shall hold and save harmless the City from any and all claims for infringement, by reason of the use of any patented design, device, material, process, any trademark, or copyright and shall indemnify the City for any costs, attorney's fees, expenses and damages which it might be obligated to pay by reason of infringement, at any time during the prosecution or after completion of the work.

4. INSURANCE AND INDEMNIFICATION.

4.1. Standard of Care.

- 4.1.1. *Professional Liability.* The Consultant shall exercise in its performance of the Basic Services and Extra Services, if any, the standard of care normally exercised by locally recognized consulting organizations engaged in performing comparable services. The Consultant shall be liable to the City for any loss, damage, or cost incurred by the City for the repair, replacement, or correction of any part of the Project that is deficient or defective as a result of any failure of the Consultant to comply with this standard.

4.1.2. *Indemnification.* The Consultant shall indemnify, defend and hold harmless the City and its agents and employees from and against all claims, damages, losses, and expenses, including, but not limited to, reasonable attorneys' fees, arising out of or resulting from the performance of the Basic Services or Extra Services, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death or injury to or destruction of tangible property (other than the Project itself), including the loss of use resulting therefrom, and (2) is caused by any negligent act or error or omission of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph 4.1.2. Further, this indemnification is intended to comply with and be subject to Section 13-50.5-102 (8), C.R.S. as amended from time to time.

4.1.3. *No Limitation on Claims.* In any and all claims against the City or against any of its agents or employees by any employee of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under subparagraph 4.1.2 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Consultant or any subconsultant under Workers' Compensation Act of Colorado or other employee benefit legislation.

4.2. Insurance.

4.2.1. *Purchase and Maintain Insurance.* In order to assure the City that the Consultant is always capable of fulfilling specified indemnification obligations, Consultant shall purchase and maintain insurance, from an insurer with an AM Best FSR rating of A- or higher, of the kind, in the amounts, and subject to the conditions shown in the Insurance Requirements attached as Exhibit B.

4.2.2. *Coverage.* Said insurance shall be maintained in full force and effect during the term of this Agreement and shall protect the Consultant, its employees, subconsultant, agents and representatives, and the City from claims for damages for personal injury and wrongful death and for damages to property arising in any manner from acts or omissions of the Consultant, its employees, agents or representatives, in the performance of the services covered herein. The insuring company will provide thirty-day written notice prior to any alteration or cancellation of the above-referenced insurance.

4.2.3. *Valuable Papers.* Furthermore, the Consultant shall carry valuable papers insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes or other similar data related to the services covered

by this Agreement in the event of their loss or destruction until such time as the final submission by the Consultant has been made and accepted by the City.

5. **NOTICE AND AUTHORIZED REPRESENTATIVES.** Any notice required or permitted by this Agreement shall be in writing and shall be sufficiently given for all purposes if sent by email to the authorized representative identified below. Such notice shall be deemed to have been given when the email was sent and received. The City may change its representative at any time by notice to the Consultant. The Consultant shall not replace the Consultant Representative unless: (a) the City requests a replacement, or (b) the Consultant terminates the employment of the Consultant Representative and provides a satisfactory substitute. The City must approve a substitute Consultant Representative, and, if no substitute is acceptable, the City may terminate this Agreement. The Parties each designate an authorized representative as follows:
 - 5.1. The City designates CIP & Construction Division Superintendent as the authorized representative of the City under this Agreement. Email address is ralford@broomfield.org.
 - 5.2. Consultant designates Jeff Berlin as the authorized representative of the Consultant under this Agreement. Email address is JBerlin@carollo.com.

If the Consultant is alleging that the City is in breach of this Agreement or has violated any term of this Agreement, Legal Notice shall be made by making the notice above with a copy to citycountyattorney@broomfield.org.

6. **INDEPENDENT CONTRACTOR.** The Consultant is an independent contractor as described in C.R.S. § 8-40-202(2). The Consultant is not entitled to workers' compensation benefits and is obligated to pay federal and state income tax on monies earned pursuant to this Agreement.
7. **APPROVAL OF SUBCONTRACTORS AND CONSULTANTS.** The Consultant shall not employ any subcontractors or consultants without the prior written approval of the City Representative. Prior to commencing any work, each subcontractor or consultant shall provide the appropriate insurance as required for the Consultant under this Agreement. The Consultant shall be responsible for coordination of the work and the acts and omissions of its agents, employees, subcontractors, consultants and suppliers, and shall bind each to the terms of this Agreement so far as are applicable. This Agreement is voidable by the City if subcontracted by the Consultant without the express written consent of the City.
8. **NO THIRD-PARTY BENEFICIARIES.** This Agreement is intended to describe the rights and responsibilities only as to the Parties hereto. This Agreement is not intended and shall not be deemed to confer any rights on any person or entity not named as a Party hereto.

9. FINANCIAL OBLIGATIONS OF THE CITY. All financial obligations of the City under this Agreement are subject to appropriation, budgeting, and availability of funds to discharge such obligations. Nothing in this Agreement shall be deemed to pledge the City's credit or faith, directly or indirectly, to the Consultant. If funds for this Agreement are not appropriated and budgeted in any year subsequent to the fiscal year of execution of this Agreement as determined by the City, this Agreement may be terminated by the City upon written notice to the Consultant. The City's fiscal year is currently the calendar year.
10. EXHIBITS. All exhibits referred to in this Agreement are by reference incorporated herein for all purposes.
11. CONFLICTS WITHIN THE CONTRACT DOCUMENTS. In the event that conflicts exist within the terms and conditions of this Agreement and the attached or referenced Agreement documents or exhibits the former shall supersede.
12. INTEGRATION AND AMENDMENT. This Agreement represents the entire agreement between the Parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the Parties. For purposes of clarity, the terms and conditions of any Consultant invoice, Consultant timesheet, or other form, including but not limited to indemnification, limitation of liability, or cancellation fees, shall be void and of no effect against the City notwithstanding any signatures on such form by a City employee. The Consultant's rights and obligations shall be solely governed by the terms and conditions of this Agreement.
13. SEVERABILITY. If any provision of this agreement as applied to either Party or to any circumstance shall be adjudged by a court to be void or unenforceable, the same shall in no way affect any other provision of this Agreement, the application of any such provision in any other circumstances or the validity, or enforceability of the Agreement as a whole.
14. ADDITIONAL DOCUMENTS OR ACTION. The Parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
15. MINOR CHANGES. The Parties executing this Agreement are authorized to make nonsubstantive corrections to this Agreement and attached exhibits, if any, as they consider necessary.
16. DOCUMENTS. All drawings, computer programs, computer input and output, analyses, plans, photographic images, tests, maps, surveys, electronic files, and written material of any kind generated in the performance of this Agreement or developed by the

Consultant specifically for the Project are and shall remain the exclusive property of the City. The Consultant shall not provide copies of any such material to any other party without the prior written consent of the City.

17. RECORDS RETENTION. The Consultant shall maintain complete and accurate records of time spent and materials used for performance of the Work, together with any invoices, time cards, or other supporting data reasonably requested. All records, data and documentation shall be retained by the Consultant for a period of not less than three (3) years after completion of the Work, and shall be subject to review, inspection and copying by the City upon reasonable notice.
18. OFFICIALS NOT TO BENEFIT. No elected or employed member of City government shall directly or indirectly be paid or receive any share or part of this Agreement or any benefit that may arise therefrom. The Contractor warrants that it has not retained any entity or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Agreement.
19. ASSIGNMENT. This Agreement shall not be assigned by the other Party without the prior written consent of the City.
20. BINDING EFFECT. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective legal representatives, successors, heirs, and assigns, provided that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.
21. DAYS. If the day for any performance or event provided for herein is a Saturday, a Sunday, a day on which national banks are not open for the regular transactions of business, or a legal holiday pursuant to C.R.S. § 24-11-101(1), such day shall be extended until the next day on which such banks and state offices are open for the transaction of business.
22. DELAYS. Any delays in or failure of performance by any Party of its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such Party.
23. NO PRESUMPTION. The Parties to this Agreement and their attorneys have had a full opportunity to review and participate in the drafting of the final form of this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction against the Party causing the Agreement to be drafted.

24. GOOD FAITH OF PARTIES. In the performance of this Agreement or in considering any requested approval, acceptance, or extension of time, the Parties agree that each will act in good faith and will not act unreasonably, arbitrarily, capriciously, or unreasonably withhold, condition, or delay any approval, acceptance, or extension of time required or requested pursuant to this Agreement.
25. WAIVER OF BREACH. This Agreement or any of its provisions may not be waived except in writing by a Party's authorized representative. A waiver by any Party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either Party.
26. GOVERNING LAW. This Agreement shall be governed by the laws of the State of Colorado. Any claims or litigation arising under this Agreement will be brought by the Parties solely in the District Court, Broomfield County, Colorado.
27. SURVIVAL OF OBLIGATIONS. The obligations contained in this Agreement that are not fully performed as of termination shall survive termination and shall continue to bind the Parties until fully performed.
28. LAWS TO BE OBSERVED. The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
29. EXECUTION; ELECTRONIC SIGNATURES. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument. This Agreement shall not be binding upon any Party hereto unless and until the Parties have executed this Agreement. The Parties approve the use of electronic signatures for execution of this Agreement. All documents must be properly notarized, if applicable.

This Agreement is executed by the Parties hereto in their respective names as of _____, 2025.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

City and County Manager

APPROVED AS TO FORM:

City and County Attorney

CONSULTANT:

Carollo Engineers, Inc.

By: 

Name: Jeffrey S. Berlin

Vice President

Address: 11030 Circle Point Road

Suite 400

Westminster, CO 80020



Becky J. Luna

Senior Vice President

Drawing List Attachment A

Final Design - Reuse Pump Station Electrical Room

Drawing No.	Drawing Title
00C03	DEMOLITION PLAN 3
00C13	PAVING AND GRADING PLAN 3
00C23	YARD PIPING PLAN 3
45A01	REUSE PUMP STATION ELECTRICAL ROOM CODE PLAN, ANALYSIS, & LEGEND
45A02	REUSE PUMP STATION ELECTRICAL ROOM FLOOR & ROOF PLAN
45A03	REUSE PUMP STATION ELECTRICAL ROOM NORTH EXTERIOR ELEVATION
45A04	REUSE PUMP STATION ELECTRICAL ROOM SOUTH EXTERIOR ELEVATION
45A05	REUSE PUMP STATION ELECTRICAL ROOM EAST & WEST EXTERIOR ELEVATIONS
45A06	REUSE PUMP STATION ELECTRICAL ROOM BUILDING SECTION
45A07	REUSE PUMP STATION ELECTRICAL ROOM BUILDING SECTION & WALL SECTIONS
45S01	REUSE PUMP STATION ELECTRICAL ROOM FOUNDATION PLAN
45S02	REUSE PUMP STATION ELECTRICAL ROOM PLAN
45S03	REUSE PUMP STATION ELECTRICAL ROOM ROOF PLAN
45S04	REUSE PUMP STATION ELECTRICAL ROOM SECTION
45H01	REUSE PUMP STATION ELECTRICAL ROOM AIRFLOW SCHEMATIC
45H02	REUSE PUMP STATION ELECTRICAL ROOM FLOOR PLAN
45H03	REUSE PUMP STATION ELECTRICAL ROOM ROOF PLAN
45E02	REUSE PUMP STATION ELECTRICAL ROOM POWER AND CONTROL PLAN
45E03	REUSE PUMP STATION ELECTRICAL ROOM LIGHTING, RECEPTACLE, AND GROUNDING PLAN
45E04	REUSE PUMP STATION ELECTRICAL ROOM ROOF POWER AND CONTROL PLAN
45N03	REUSE PUMP STATION ELECTRICAL ROOM HVAC P&ID

Drawing List Attachment A

Final Design - EQ Pump Station and EQ Equipment Room

Drawing No. Drawing Title	
16A01	EQUALIZATION EQUIPMENT ROOM CODE PLAN, ANALYSIS, & LEGEND
16A02	EQUALIZATION EQUIPMENT ROOM FLOOR & ROOF PLANS
16A03	EQUALIZATION EQUIPMENT ROOM BUILDING SECTION & EXTERIOR ELEVATIONS
16A04	EQUALIZATION EQUIPMENT ROOM WALL SECTIONS & DETAILS
16H01	EQUALIZATION EQUIPMENT ROOM FLOOR AND ROOF PLAN
16N01	OLD HEADWORKS EQUALIZATION EQUIPMENT ROOM HVAC P&ID 1
16S01	EQUALIZATION EQUIPMENT ROOM PLANS 1
16S02	EQUALIZATION EQUIPMENT ROOM PLANS 2
16S03	EQUALIZATION EQUIPMENT ROOM SECTIONS
24A01	EQUALIZATION PUMP STATION CODE PLAN, ANALYSIS, & LEGEND
24A02	EQUALIZATION PUMP STATION FLOOR PLAN
24A03	EQUALIZATION PUMP STATION ROOF PLAN
24A04	EQUALIZATION PUMP STATION EXTERIOR ELVATIONS
24A05	EQUALIZATION PUMP STATION BUILDING SECTIONS
24A06	EQUALIZATION PUMP STATION WALL SECTIONS & DETAILS
24H01	EQUALIZATION PUMP STATION AIRFLOW SCHEMATIC
24H02	EQUALIZATION PUMP STATION PLAN
24N05	EQUALIZATION PUMP STATION HVAC P&ID
24S03	EQUALIZATION PUMP STATION UPPER PLAN
24S04	EQUALIZATION PUMP STATION ROOF PLAN
24S05	EQUALIZATION PUMP STATION SECTIONS 1
24S06	EQUALIZATION PUMP STATION SECTIONS 2

Attachment C

Broomfield Water Recovery Facility Phase 1B Improvements Design Fee Estimate																			
6/6/2025																			
Team Member		Project Manager/Senior Specialist	Senior Specialist	Senior Professional	Project Professional	Professional	Assistant Professional II	Assistant Professional I	Senior Construction Manager	Senior Technician	Technician II	Technician I	Document Processing	Carollo Hours	Carollo Labor Cost	Subcontractors (+10%)	Project Equipment Communication Expense (PECE)	Carollo ODCs	Total Engineering Cost
Task	Description	\$ 290	\$ 290	\$ 260	\$ 230	\$ 199	\$ 175	\$ 150	\$ 270	\$ 220	\$ 175	\$ 135	\$ 145				\$16,000		
100	Project Management																		
110	Project Coordination and Progress Reporting	60												60	\$ 17,400		\$ 960	\$ -	\$ 18,360
120	Project Initiation and Kickoff Meetings	12	6	12	12	16	16	16	4	8				102	\$ 22,324		\$ 1,632	\$ 500	\$ 24,456
130	Project Meetings	196	100	184	186	182	148	167	136	76	19			1,394	\$ 320,341		\$ 22,301	\$ 27,750	\$ 370,392
	Subtotal Task 1 Hours	268	106	196	198	198	164	183	140	84	19	0	0	1,556					
	Subtotal Task 1 Costs	\$ 77,720	\$ 30,740	\$ 50,908	\$ 45,540	\$ 39,402	\$ 28,700	\$ 27,450	\$ 37,800	\$ 18,480	\$ 3,325	\$ -	\$ -		\$ 360,065	\$ -	\$ 24,893	\$ 28,250	\$ 413,208
200	Phase 1 Additional Design																		
210	Reuse Pump Station Electrical Room	24	24	40	60	80	40	40	8	80	60		16	472	\$ 99,620	\$ -	\$ 7,552	\$ -	\$ 107,172
220	EQ Pump Station Building and EQ Equipment Room	8	32	24	48	80	24	40		80	96		16	448	\$ 91,720	\$ 4,560	\$ 7,168	\$ -	\$ 103,804
230	Zoning Analysis and Support	2			24									26	\$ 6,100	\$ -	\$ 416	\$ -	\$ 6,516
	Subtotal Task 2 Hours	34	56	64	132	160	64	80	8	160	156	0	32	946					
	Subtotal Task 2 Costs	\$ 9,860	\$ 16,240	\$ 16,640	\$ 30,360	\$ 31,840	\$ 11,200	\$ 12,000	\$ 2,160	\$ 35,200	\$ 27,300	\$ -	\$ 4,640	\$ -	\$ 197,440	\$ 4,560	\$ 15,136	\$ -	\$ 217,592
300	Preliminary Design																		
301	Secondary Treatment and Process Model Update	32	40	128		112		120						432	\$ 94,448		\$ 6,912	\$ -	\$ 101,360
301	Dewatering	20	40	24		8	124		8	8				232	\$ 50,852		\$ 3,712	\$ -	\$ 54,564
302	Centrate Equalization and Pumping	12	16	8			60		8	8				112	\$ 24,620		\$ 1,792	\$ -	\$ 26,412
303	Temporary WAS Thickening	8	24	8			80							120	\$ 25,360		\$ 1,820	\$ -	\$ 27,180
304	Electrical and Instrumentation Support Infrastructure	4	16	40	24	24								108	\$ 26,496		\$ 1,728	\$ -	\$ 28,224
305	Headworks Screening	8	40	8	60				8					124	\$ 29,700		\$ 1,984	\$ -	\$ 31,684
306	South Train Air Header	16		32	24			24	4	8				108	\$ 24,176		\$ 1,728	\$ -	\$ 25,904
307	Site Layout and Space Considerations	40	16	16	24	16	40		8		16			176	\$ 41,064		\$ 2,816	\$ 100	\$ 43,980
308	Geotechnical Investigation and Site Survey	8	16		32									56	\$ 14,200	\$ 176,865	\$ 896	\$ 100	\$ 209,868
309	Laser Scanning	8			16					16	32	416	20	488	\$ 71,280		\$ 7,868	\$ 5,000	\$ 84,088
310	Basis of Design Report	16	32	64	40	40	48	48	8	24	8		20	348	\$ 75,060		\$ 5,568	\$ -	\$ 80,628
320	Preliminary Design Drawings	197	33	526	822	690	526	493		802	1,146	344		5,580	\$ 1,119,468	\$ 5,000	\$ 89,280	\$ 500	\$ 1,214,748
330	Preliminary Design Visualizations	12			16					80				108	\$ 24,760		\$ 1,728	\$ 2,000	\$ 28,488
340	Preliminary Design Specifications TOC	2	8	8	8	4	4						16	50	\$ 10,036		\$ 800	\$ -	\$ 11,436
350	Preliminary Design Workshops	24	16	16	16	16	24	16			8			148	\$ 33,864		\$ 2,368	\$ 500	\$ 36,732
360	Coordination with CMGC Contractor	24		8	16	8			16					72	\$ 18,632		\$ 1,152	\$ -	\$ 19,784
370	Quality Check	8	194	48	8									258	\$ 72,888		\$ 4,128	\$ 1	\$ 77,017
380	Permitting Assistance (Site Application)	4		24	4	24	24	24	64	562	1,218	760	52	1,936	\$ 26,376		\$ 2,176	\$ 500	\$ 29,052
	Subtotal Task 3 Hours	443	490	958	1,026	1,026	930	725	64	562	1,218	760	52	8,656					
	Subtotal Task 3 Costs	\$ 128,541	\$ 142,237	\$ 249,180	\$ 235,946	\$ 204,244	\$ 162,747	\$ 108,767	\$ 17,280	\$ 211,730	\$ 213,203	\$ 102,585	\$ 7,540		\$ 1,784,000	\$ 181,865	\$ 138,496	\$ 8,701	\$ 2,131,248
400	Final Design																		
410	Design Drawings (60% 80%)	480	77	1,227	1,918	1,611	1,227	1,151		1,872	2,675	802		13,020	\$ 2,612,091	\$ 25,000	\$ 208,320	\$ 1,000	\$ 2,848,911
415	Final Design Visualizations	16			8					160				184	\$ 41,680		\$ 2,944	\$ 5,000	\$ 49,624
420	CFD Modeling	16	80				200				24			320	\$ 67,040		\$ 5,120	\$ -	\$ 72,160
430	Stormwater Coordination				60			40						100	\$ 19,800		\$ 1,600	\$ -	\$ 21,400
440	Specifications	40	60	100	120	100	40	40					160	660	\$ 138,720		\$ 10,560	\$ -	\$ 149,280
445	Early Work Package	24	24	24	48	48	40	40	16	60	20		24	368	\$ 78,252		\$ 5,888	\$ -	\$ 84,140
450	Design Workshops (60% 80%)	48	16	24	24	24	40	40						232	\$ 52,416		\$ 3,712	\$ 1,000	\$ 57,128
460	Permitting Assistance	32	8	48			40	40					24	192	\$ 40,560		\$ 3,072	\$ -	\$ 43,632
470	Coordination with CMGC Contractor	48	40	40			60		40	8				236	\$ 58,480		\$ 3,776	\$ 500	\$ 63,256
480	Quality Check	24	774	194	16					16			4	1,028	\$ 289,652		\$ 16,448	\$ -	\$ 306,100
490	Issued For Permitting Set	16	16	24	24	16	16	40	16	120	40	40	32	400	\$ 80,784		\$ 6,400	\$ 2,000	\$ 89,184
	Subtotal Task 4 Hours	724	1,695	1,681	2,218	1,799	1,663	1,391	88	2,236	2,759	842	244	16,740					
	Subtotal Task 4 Costs	\$ 210,028	\$ 317,581	\$ 437,033	\$ 510,060	\$ 357,565	\$ 291,077	\$ 208,585	\$ 23,760	\$ 481,584	\$ 482,773	\$ 113,725	\$ 35,380		\$ 3,475,955	\$ 25,000	\$ 287,840	\$ 8,500	\$ 3,784,795
5	WRF and Water Utility Support																		
510	One Water Evaluation	8	100			80				8			16	212	\$ 51,320	\$ -	\$ 3,392	\$ 200	\$ 54,912
520	Process Support, Training, and Optimization	42		132				120						284	\$ 64,500	\$ -	\$ 4,704	\$ 1,000	\$ 70,204
	Subtotal Task 5 Hours	50	100	132	0	80	0	120	0	8	0	0	0	16	596				
	Subtotal Task 5 Costs	\$ 14,500	\$ 29,000	\$ 34,320	\$ -	\$ 15,920	\$ -	\$ 18,000	\$ -	\$ 1,760	\$ -	\$ -	\$ -	\$ 16	\$ 115,820	\$ -	\$ 8,096	\$ 1,200	\$ 125,116
	Total Project Hours	1,619	1,848	3,031	3,874	3,363	2,821	2,489	300	3,451	4,152	1,602	344	28,404					
	Total Direct Labor Dollars	\$ 440,649	\$ 535,798	\$ 788,081	\$ 821,905	\$ 649,373	\$ 493,724	\$ 374,805	\$ 81,000	\$ 759,154	\$ 726,600	\$ 216,311	\$ 45,880		\$ 5,937,280	\$ 211,425	\$ 454,461	\$ 47,651	\$ 6,671,359

EXHIBIT A

Basic Services

CONSULTANT'S SERVICES

Note that some tasks include a percentage of the work approved in this contract with further work to be approved in a subsequent contract.

TASK 100 – PROJECT MANAGEMENT AND COORDINATION

Subtask 110 – Project Management. The Consultant will prepare and submit monthly progress reports with invoices for the work completed in the last monthly period and compare earned value to actual expenditures for the month and project duration. Invoices shall be in accordance with the Agreement Between City and Consultant. Progress reports will include an updated schedule, as appropriate, and decision log, and will be reviewed by the City. The status reports will also identify or forecast proposed modifications to the project scope. Key issues requiring City action or direction will also be included. Monthly progress reports will be submitted to the City on or before the 15th of each month. A total of twenty-four (24) monthly reports are anticipated for this phase of work. 35% of the total project effort is included in this contract.

Subtask 120 – Project Initiation and Kickoff Meetings. The Consultant will set up project reporting documents and will maintain the existing SharePoint site for file sharing. The Consultant will prepare for and attend internal and external kickoff meetings. Consultant will develop an agenda prior to the kickoff meeting and compile meeting minutes for submission to the City within seven (7) days after meeting.

Subtask 130 – Project Meetings. The Consultant will prepare for and attend the following project meetings:

- Coordination Meetings
 - Coordination meetings are assumed to occur every four (4) weeks. The purpose of the coordination meetings is to keep the City informed of Consultant's project progress, and to provide the Consultant timely and important feedback. Meetings will be held at the City's BWRf or at Consultant's office at the direction of City Project Manager.
 - On a biweekly basis, Consultant's Project Manager will hold a thirty (30) minute project update teleconference meeting with the City's Project Manager. The Project Managers may include other project staff in each teleconference at their discretion. These meetings will be scheduled at a mutually agreed upon recurring timeslot.
- Internal Design Coordination Meetings
 - The Consultant shall hold weekly coordination meetings with design staff to review design status and coordinate between disciplines.
- City Council Meetings
 - The Consultant shall attend two City Council meetings to provide information on the status of the project. City will provide schedule and format for Consultant presentation.

TASK 200 – PHASE 1 ADDITIONAL DESIGN

Subtask 210 – Reuse Pump Station Electrical Room. Consultant shall prepare drawings on 22" x 34" sheet size (11" x 17" half-size) in Revit and deliver drawings in PDF. A list of anticipated drawings required for representation of the civil, structural, architectural, building mechanical, electrical, and instrumentation project elements is included in Attachment A. Consultant will submit Issued For Permitting deliverable for CMAR Contractor pricing development.

Design elements included in the project are as follows:

- Deep foundation design to support single-story masonry building structure with steel joist roof.
- Architectural design to match existing, adjacent Reuse Pump Station.
- Site civil design to support grading and ductbank routing in the area of the new building.
- Lighting, heating, ventilation, and electrical equipment layout.

Subtask 220 – EQ Pump Station Building and EQ Equipment Room. Consultant shall prepare drawings on 22" x 34" sheet size (11" x 17" half-size) in Revit and deliver drawings in PDF. A list of anticipated drawings required for adequate representation of the structural, architectural, and building mechanical project elements is included in Attachment A. Consultant will submit Issued For Permitting deliverable for CMAR Contractor pricing development.

Design elements included in the project are as follows:

- EQ Pump Station Building Structure, including foundation design to support masonry building structure with steel joist roof. Architectural components will match existing Old Headworks Building veneer. Building components will include plumbing drains, heating, and ventilation.
- EQ Equipment Room Building Structure, including foundation design to support masonry building structure with precast concrete roof. Architectural components will match existing Old Headworks Building veneer. Building components will include plumbing drains, heating, cooling, and ventilation.

Subtask 230 – Zoning Analysis and Support. Consultant will support City with analysis of current zoning at the BWRF, including compliance of existing facilities, Phase 1 facilities, and future Phase 2-5 facilities with the current A1 zoning and recommend to City whether to proceed with rezoning the site to Public Facilities zoning. No meetings are anticipated and deliverable will be recommendations and figures provided via email.

TASK 300 – PRELIMINARY DESIGN

This phase consists of numerous conceptual and preliminary design evaluations and the development of preliminary design documents culminating in the 30% design. Advancement of design concept from Master Plan will include considerations raised in Phase 1 design and coordination of high-level design concept with current BWRF needs. Work in Tasks 300 through 309 will be documented in the Basis of Design Report and reviewed at regularly scheduled progress meetings.

Subtask 300 – Secondary Treatment and Process Model Update. Consultant shall update the existing steady state BioWin process models for the BWRF, that were last modified as part of the Master Plan (Carollo, 2023). The City will provide relevant process data for the period through June 2025.

Process model will be re-validated, with calibration updated as needed, based on the previous three years of data. The period(s) to be used for calibration will be coordinated with the City. Calibration will be developed to a reasonable precision suitable for process design, based on Consultant's experience. The City will support this task through specific raw influent and process profile sampling, as needed and as capabilities allow, to improve process model reliability and accuracy. Consultant shall discuss and document areas of uncertainty with City and where necessary, conduct sensitivity analyses to manage

risk and select appropriate design safety factors. Process model updates for the facility will be summarized as an appendix to the Basis of Design Report.

Consultant will advance conceptual approach for secondary treatment recommendations from BWRF Master Plan for Phase 1B (originally part of Phase 2). The Master Plan recommended a new 4th IFAS train and 2 new secondary clarifiers, along with replacement of media in the Middle Train. Since this recommendation, other technology options have either emerged or are maturing and could be investigated as an alternative to the current IFAS approach, including membrane aerated biofilm reactor (MABR), mobile organic biofilm (MOB), and Cella. Process flow diagrams, design criteria, needs for flow split structures, treatment process recommendations, and high-level sequence of modifications will be summarized.

Subtask 301 – Dewatering. Consultant shall advance conceptual approach for dewatering recommendations from BWRF Master Plan for Phase 1B, including replacement of existing centrifuges and conveyors. Considerations for centrifuge replacement and potential addition of a third centrifuge, approach to dewatered cake conveyance, and sequence of modifications will be summarized. Other solids handling improvements identified in the Master Plan for Phase 2 will be denoted and considerations for delay of Phase 2 documented.

Subtask 302 – Centrate Equalization and Pumping. Consultant shall advance conceptual approach for centrate equalization and pumping for Phase 1B. Interim concept for centrate is to use the abandoned Flow Equalization Basins and Pump Station after completion of new Equalization Basins and Pump Station in Phase 1. Evaluation will review feasibility and recommend considerations for interim operation as centrate EQ.

Subtask 303 – Temporary WAS Thickening. Consultant shall evaluate approach to temporary WAS thickening. Current DAF mechanism and center drive are failing. A new DAF is proposed in future Phase 2, but an interim thickening solution should be considered. Alternatives could be replacement of existing mechanism or a temporary skid mounted unit. Evaluation will review and recommend considerations temporary WAS thickening, including consideration of construction sequence. No design elements for this system are included in the detailed design.

Subtask 304 – Electrical and Instrumentation Support Infrastructure. Consultant shall advance conceptual approach for electrical and instrumentation infrastructure to support Phase 1B expansion. Specifically, new MCC and power for proposed new North Aeration Train will be evaluated in conjunction with Phase 1 modifications.

Subtask 305 – Headworks Screening. Consultant shall evaluate Headworks screening and washing improvements. City has indicated that screening and washing/compacting equipment is problematic and nearing end-of-life. Documentation of condition and performance, recommendations for improvements, screening technology, process flow diagrams, design criteria, layout, and high-level sequence of modifications will be summarized.

Subtask 306 – South Train Air Header. Consultant shall evaluate air piping arrangement for Middle and South Trains to alleviate air flow split and DO control issue when operating both Middle and South Trains. Potential for a parallel air header pipe and tie-in points will be evaluated including conceptual layout.

Subtask 307 – Site Layout and Space Considerations. Consultant shall compile results from above evaluations and consider overall site layout to achieve project goals and site space usage. An updated graphic layout of new proposed Phase 1B project elements will be prepared.

Subtask 308 – Geotechnical Investigation and Site Survey. Consultant will engage and coordinate with Geotechnical SUBCONSULTANT to perform a geotechnical investigation and provide a report document findings of the investigation and provide recommendations necessary for design of additional Phase 1B facilities. It is anticipated the Geotechnical SUBCONSULTANT will utilize historical geotechnical reports along with results from subsurface exploration and sampling from up to 6 borings.

Consultant will engage and coordinate with Site Survey SUBCONSULTANT to complete a site topographic survey to obtain a 1 foot contour map of the site, locate underground utilities within the area proposed for the new North Aeration Train, and potholing of up to 15 locations to locate buried piping and infrastructure.

Subtask 309 – Laser Scanning. Consultant will provide 3D laser scanning of the lower level of the North Aeration Complex and the Centrifuge Dewatering Building to assist in generating 3D CAD models and drawings for Phase 1B facility layouts based on the current layouts.

Subtask 310 – Basis of Design Report. Consultant will prepare a Basis of Design Report (BDR) documenting design direction for the project. Consultant will review new population projections and impacts on flow and load capacity needs. Deliverable will assist City in scope development, schedule, and identification of key components in Phase 1B along with documentation of recommended preliminary design alternative evaluations. In addition to documenting the results of Tasks 300 through 308, the BDR will include sections covering the following topics:

Hydraulic Profile

- Update Carollo's proprietary Excel based Hydraulix® program developed in Phase 1 to accommodate new liquids stream processes.
- Plant flow conditions to be evaluated in hydraulic model:
 - Current average flow of 6.5 mgd, ADMMF of 12 mgd, and PHF of 31.2 mgd upstream of equalization and 18.6 mgd downstream of equalization.
 - Future ADMMF of 14.1 mgd and 36.4 mgd PHF upstream of equalization and 18.6 mgd downstream of equalization.

Preliminary and Primary Treatment

- Evaluate screenings challenges noted by staff, including screening efficacy, maintenance of screens and washer/compactors, performance of washer/compactors, hydraulic limitations/bypass use, and summarize recommendations for rehabilitation or modification.
- Evaluate scum accumulation in grit basins and potential modifications to minimize the need for vac truck scum removal from this location.

Secondary Treatment

- Evaluate new North Train basins, layout, pumping systems, and IFAS media type and approach. Evaluate considerations for new train, flexibility of use of both North Trains, and modifications to existing North Train.
- Evaluate up to three new process alternatives to either supplement IFAS or to transition the facility to an alternative intensification alternative. These may include:
 - Installation of MABR upstream of the IFAS reactors, intensifying both the aerated and unaerated zones for enhancing nitrogen removal while reducing energy and external carbon demands.
 - Conversion of the IFAS system into an MOB system.
 - Conversion of the IFAS system into a Cella (by Veolia) based system.
- Confirm target air flow demands, blower unit sizing, and blower redundancy requirements, assuming air flow requirements defined in Phase 1.
- Evaluate blower room modifications and layout to accommodate new air piping in Phase 1B per Phase 1 concept.
- Recommend process control improvements for DO control, air flow measurement, and instrumentation necessary for aeration system optimization.
- Provide recommendations for design of new Secondary Clarifiers 7 and 8, including locations, assessment of flow split and reconnection to secondary effluent piping, and recommendations for mechanism design.
- Document recommendations for recoating Secondary Clarifier 5 and 6 mechanisms as part of Phase 1B construction.

- Provide recommendations for split air header piping at Middle and South Trains.

Solids Handling

- Evaluate dewatering centrifuge replacement.
- Evaluate interim centrate equalization tank volume and pumping, anticipated to consider utilization of existing flow equalization basin and pump station.

Structural

- Evaluate structural approach and design criteria for new Phase 1B facilities.

Electrical, Instrumentation, and Control

- Evaluate electrical infrastructure necessary to support project components.
- Evaluate instrumentation and control infrastructure necessary to support project components.

Architectural

- Prepare NFPA 820 and building code review summary for project improvements.
- Summarize Generator 1 Building brick veneer recommendations.

HVAC

- Summarize recommended and code required air flow, heating, and cooling requirements for Influent Screening Room, Generator 1 Building, North Aeration Complex, and Dewatering Building.

A BDR will be compiled in a format aligned with CDPHE's Site Application Engineering Report. The BDR will also document basis of design criteria for each discipline. The BDR will be submitted as draft for City review. Consultant will incorporate City's review comments, as appropriate, into a final BDR, which will be submitted as the Engineering Report as part of the CDPHE Site Application.

Subtask 320 – Preliminary Design Drawings. Consultant shall prepare 30% level design drawings on 22" x 34" sheet size (11" x 17" half-size) in Revit and deliver PDF drawings using the Consultant's CAD standards. The City will provide written comments on the 30% Progress Submittal within four (4) weeks.

Subtask 330 – Preliminary Design Visualizations. Consultant shall prepare 3D PDF renderings and virtual reality visualizations of 30% design drawings for review and comment by City.

Subtask 340 – Preliminary Design Specifications TOC. Consultant shall prepare a specification Table of Contents at 30% progress submittal.

Subtask 350 – Preliminary Design Workshops. Consultant shall prepare for and conduct three (3) Preliminary Design Workshops. Each design workshop is anticipated to be up to four (4) hours in length. Consultant will develop an agenda prior to the meeting and compile meeting minutes for submission to the City within seven (7) days after meeting.

Subtask 360 – Coordination with CMGC Contractor. Consultant will hold a one-day meeting with CMGC Contractor to review preliminary design components, with a focus on constructability and construction sequencing. Consultant will respond to and incorporate CMGC comments on cost, design direction, and project sequence including consideration of an early work package in Final Design. Consultant will not provide an independent opinion of probable costs.

Subtask 370 – Quality Check. Consultant shall provide an in-house quality check of the drawings and specifications using an independent team on the 30% design submittal prior to delivery. Appropriate check comments will be incorporated into the 30% drawings and specifications.

Subtask 380 – Permitting Assistance (Site Application). Consultant shall prepare and submit Site Application approval request to CDPHE, with BDR serving as Engineering Report for Site Application approval. Consultant shall conduct a coordination meeting with CDPHE staff regarding process design and project components. Consultant shall coordinate with City and prepare materials for City submittal for City and County approval. Initial project permitting requirements for City and County fire and code review will be defined and reviewed with appropriate City representatives.

**TASK 400 – FINAL DESIGN - TO BE AUTHORIZED IN A FUTURE AMENDMENT
NOT INCLUDED IN THIS CONTRACT**

TASK 500 – WRF AND WATER UTILITY SUPPORT

Subtask 510 – One Water Evaluation. Consultant shall initiate the development of a One Water roadmap consisting of the following tasks, with development and rollout of the One Water Plan and stakeholder engagement and project opportunities necessary to complete the One Water Roadmap conducted as a subsequent, separate task. 85% of the total project effort is included in this contract.

Gaps and Needs Inventory

Task 510.1 – Data Gathering and Review

Carollo will gather and compile information about Broomfield's water resources, water systems, water management challenges and strategies, and pertinent existing CCOB plans and efforts that could inform or support the One Water Roadmap. This task will start with the development of a data gathering list. Carollo will review the gathered data and reports. An inventory matrix will be developed that summarizes the type of information that is included in each of the reference reports, along with the type of water management challenges and solutions that are identified in each plan.

At a minimum, this task will include review of the most recent version of the following documents:

- Water System Master Plan (or similar)
- Wastewater System Master Plan (or similar)
- Recycled Water System Master Plan (or similar)
- Stormwater System Master Plan (or similar)
- Asset Management Plan (or similar)
- Water Conservation Plan (or similar)
- Broomfield Landscape Ordinance
- Most recent update from the ongoing Comprehensive Plan
- Most recent water, wastewater, and stormwater rate studies
- Other pertinent plans/studies/ordinances/data sets

The prioritized data gathering list that will be maintained throughout the project as information is gathered and will be transitioned into an electronic library with links to the gathered information.

Task 510.2 – Interviews

Carollo will prepare for and conduct up to ten (10) interviews with CCOB staff and regional partners to gather insights into Broomfield's current water management challenges and potential collaboration opportunities to develop a One Water Roadmap that provides a long-term vision and supports informed decision-making. It is anticipated that the 1:1 interviews will include managers/staff from CCOB as well as representatives from key regional partner agencies that will be identified by Broomfield's Project Manager in consultation with Carollo.

It is assumed that all interviews will take place virtually and not exceed 1 hour each. Interview questions will be prepared by Carollo and submitted for review and comment by Broomfield's project manager. The interviews will be recorded to facilitate note taking. Interview summaries with key takeaways will be

prepared within two weeks of the completion of each interview. The interviews will be conducted by Carollo's technical lead and supported by a staff engineer.

Task 510.3 – Gaps and Needs Summary

A Gaps and Needs Memorandum will be prepared based on the documents review, information shared during the kickoff meeting, and the 1:1 interviews. This summary will include recommendations to address the identified gaps and needs and will be submitted in electronic format. CCOB comments on the Memorandum will be incorporated in the Final One Water Roadmap deliverable.

Deliverables:

- Prioritized Data Gathering List (xlsx format)
- Electronic One Water Plan reference library
- Draft and Final Interview questionnaire (docx format)
- Gaps and Needs Memo, incl. interview summaries (docx and pdf format)

Grant Application

Task 510.4 – Draft Grant Application

Carollo will reach out to the CWCB to gather insights on the timing and potential for obtaining grant funding to support the preparation of either the One Water Roadmap (Phase 1) or a subsequent Phase 2 to develop a comprehensive One Water Plan. Carollo will gather and develop the necessary information to prepare a draft CWCB Water Plan grant application for review by CCOB.

Task 510.5 – Final Grant Application

One of the project meetings included in Task 3 will be used to discuss Broomfield's comments on the draft grant application. Carollo will work with CCOB staff to make the necessary changes to prepare a final grant application for the CWCB. It is assumed that CCOB staff will submit the final grant application.

Deliverables:

- Draft Grant Application (docx and pdf)
- Final Grant Application (docx and pdf)

Project Administration and Meetings

Task 510.6 – Project Meetings

Carollo will prepare meeting agendas, materials, and notes for up to 5 project progress meetings, including a formal kickoff meeting. It is assumed that all meetings will be conducted virtually. Meeting agendas and notes will be submitted electronically 1 week prior and after each meeting, respectively.

In addition, up to five (5) monthly PM status calls/virtual meetings will be held between Broomfield's and Carollo's project managers to coordinate agendas and content of the monthly project meetings, make decisions, and keep the project on-track. These calls will be scheduled in between the monthly meetings to maintain frequent communications. No formal agendas or meeting notes will be prepared for the PM status calls. However, an action item and decision log will be prepared and maintained throughout the project.

Task 510.7– Project Administration

Carollo will conduct the necessary project administrative duties to prepare monthly invoices with associated progress reports describing the work performed in the month of billing and anticipated work in the following month. In addition, a project schedule will be prepared and updated monthly. Carollo will also set up and host a MS Teams project site for collaborative file sharing between Carollo and the Broomfield team members. A folder structure will be created to organize information gathered and developed during the project, including draft and final deliverables.

Deliverables:

- Meeting agendas, meeting materials, and meeting notes (5)
- Action Item and Decision Log with as-needed updates (xlsx format)
- MS Teams project site
- Monthly invoices and progress reports (up to 5)
- Project schedule with updates (up to 5).

Subtask 520 – Process Support, Training, and Optimization. Consultant shall support BWRf operations and process control with support and training on an as-needed basis up to the total amount scoped of \$70,204. Process support includes carbon system optimization, Cella pilot coordination, and nutrient removal process support. 85% of the total project effort is included in this contract.

PROJECT DELIVERABLES

Deliverables for this project include the following:

- Monthly Progress Reports and Invoices; PDF file to be provided to the City's Project Manager.
- Meeting agenda and meeting minutes; PDF files via e-mail.
- Basis of Design Report (draft and final); PDF files. Final Basis of Design Report will serve as CDPHE Site Amendment Application and Engineering Report.
- Geotechnical Report (draft); PDF files.
- 30% Progress Submittal Drawings; PDF files and two (2) hard copies.

ASSUMPTIONS

- City will provide all record information for facilities, and Consultant shall be able to rely on the information provided in such documents.
- CAD files for existing facility are not available.
- Revit and Carollo CAD Standards will be used for developing CAD drawings.
- Aggressive schedule of project design will be targeted, CDPHE review times will be discussed regularly with City and CMGC Contractor and reasonable assumptions made to maintain schedule.
- In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for potential projects, the Consultant has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, the Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from the Consultant's opinions, analyses, projections, or estimates.
- Confirmed documents issued for construction will be covered in the Construction Administration contract and are not included in this scope of work.
- Project does not include CDPHE permitting coordination with respect to new process authorization.
- Final design will be authorized under a separate contract or amendment.

TIME OF PERFORMANCE

Consultant shall complete all services identified in this scope by August 31, 2027 in accordance with the schedule outlined below:

Meeting / Deliverable	Date
Executed Contract	July 23, 2025
Basis of Design Report	November 15, 2025
One Water Roadmap Gaps and Needs, One Water Grant Application	December 31, 2025
30% Progress Submittal	February 28, 2026

PAYMENT

Consultant will perform the Scope of Services described in Tasks 100, 200, 300 and 500 for a not-to-exceed amount of \$2,503,579. The cost associated with each Task is summarized below and will be billed per Fee Schedule provided in Attachment C.

The Consultant shall bill City monthly indicating the services performed and the cost of such services according to the attached fee schedule.

Task	Budget Hours	Budget Amount
Task 100 – Project Management	182	\$48,390
Task 200 – Phase 1 Additional Design	946	\$217,592
Task 300 – Preliminary Design	8,656	\$2,131,248
Task 500 – WRF and Water Utility Support	430	\$106,349
Total	10,214	\$2,503,579

EXHIBIT B

INSURANCE REQUIREMENTS

City and County of Broomfield Insurance Requirements Including General Liability, Automobile, Workers' Compensation, and Professional Liability

General Requirements (Version dated December 2024)

1. All insurers shall be licensed or approved to do business within the State of Colorado.
2. Contractor/Vendor's insurance carriers shall have an A.M. Best Company rating of at least A- Class VII.
3. Additional Insured. City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, umbrella liability, excess liability, and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations).
4. Primacy of Coverage. Coverage required of Contractors and Subcontractors shall be primary and non-contributory to any insurance carried by the City and County of Broomfield.
5. All subcontractors must meet the same insurance requirements for the Contract or Purchase Order unless Risk Management has approved a deviation.
6. Subrogation Waiver. All insurance policies required under this Contract maintained by Contractor or its Subcontractors shall waive all rights of recovery against City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield.
7. Cancellation, Change in Coverage or Limits. The above insurance policies shall include provisions preventing cancellation, non-renewal, or reduction in coverage or limits of any insurance, without at least 30 days prior notice to Contractor/Vendor and Contractor/Vendor shall forward such notice to within seven days of receipt of such notice.
8. Certificates. Contractor and all Subcontractors shall provide certificates showing insurance coverage required hereunder to the City and County of Broomfield within 5 days of:
 - a. the effective date of the Contract
 - b. the expiration date of any coverage
 - c. a request by the City and County of Broomfield
9. Separation of Insureds. All insurance policies shall include coverage for cross liability and contain a "Separation of Insureds" provision in the general liability policy.
10. City and County of Broomfield in no way warrants that the limits required herein are sufficient to protect the Contractor/Vendor from liabilities that may arise out of the performance of the work under this Contract by the Contractor, its agents, representative, employees or subcontractors. The Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration or type.
11. All parties understand and agree that the City and County of Broomfield is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations, immunities, protections or any other rights provided by the Colorado Governmental Immunity Act.
12. The City and County of Broomfield reserves the right to negotiate additional specific insurance requirements at the time of the Contract.
13. The City and County of Broomfield and Contractor shall cooperate with each other in the collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery.

Insurance Requirements

The Vendor/Contractor/Subcontractor shall obtain and maintain, at its own expense, and for the duration of the Agreement including any warranty periods under which the Agreement are satisfied, the following:

Commercial General Liability

Commercial General Liability insurance covering all operations by or on behalf of the contractor/vendor on an occurrence basis against claims for bodily injury, property damage (including loss of use), advertising liability, products and completed operations, and contractual liability. For contracts involving vendor/contractor contact with minors or at risk adults, Sexual Abuse and Misconduct Coverage should be included in the coverage requirements and listed on the certificate.

Minimum limits:

- \$1,000,000 Each Occurrence
- \$2,000,000 General Aggregate (per project aggregate for construction contracts)
- \$2,000,000 Products/Completed Operations Aggregate (for construction projects, this coverage should be maintained for a minimum of 3 years from the end of the project)

Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired, and non-owned autos).

Minimum limits:

- \$1,000,000 each accident combined single limit
- If hazardous materials are transported, an MCS 90 form shall be included on the policy

Workers' Compensation

Workers' Compensation Insurance as required by State statute, covering all Vendors/Contractors employees acting within the course and scope of their employment. This requirement shall not apply when a contractor or subcontractor is exempt under the Colorado Workers' Compensation Act and when such contractor or subcontractor provides an appropriate sole proprietor letter.

Employer's Liability with minimum limits:

- \$100,000 Each Accident
- \$100,000 Each Employee by Disease
- \$500,000 Disease Aggregate

Professional Liability

Contractor/Vendor will purchase and maintain professional liability insurance covering any damages caused by an error, omission or negligent professional act to include the following coverages:

- Limited Contractual Liability
- If coverage is Claims Made, a retroactive date prior to the inception of the work
- If coverage is Claims Made, similar coverage must be maintained for three years following the completion of the work or an extended reporting period of 36 months must be purchased

Minimum Limits:

- \$1,000,000 Per Claim
-
- \$2,000,000 General Aggregate

Deviations

Any deviations below the standards given above must be approved by the City and County of Broomfield's Risk Management office. Please direct any questions to RiskManagement@broomfield.org.

Certificate Holder/Certificate of Insurance (COI)

On all Certificates of Insurance the following shall be named an Additional Insured and included on the Certificate provided:

The City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, Umbrella Liability, Excess Liability, and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations). A Waiver of Subrogation is provided in favor of the Additional Insureds as respects to all policies.

City and County of Broomfield
One DesCombes Drive
Broomfield, CO 80020-2495
certificates@broomfield.org

AIA® Document A133® – 2019 Exhibit A

Guaranteed Maximum Price Amendment

This Amendment dated the 1st day of July in the year 2025, is incorporated into the accompanying AIA Document A133™–2019, Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price dated the 31st day of March in the year 2025 (the “Agreement”)

(In words, indicate day, month, and year.)

for the following **PROJECT:**

(Name and address or location)

Broomfield Water Recovery Facility Phase 1 Improvements

THE OWNER:

(Name, legal status, and address)

City and County of Broomfield, Colorado municipal corporation and county
One DesCombes Drive Broomfield Colorado 80020

THE CONSTRUCTION MANAGER:

(Name, legal status, and address)

Moltz Construction, Inc.

PO Box 729 (8807 CR 175) Salida, CO 81201

TABLE OF ARTICLES

A.1 GUARANTEED MAXIMUM PRICE

A.2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

A.3 INFORMATION UPON WHICH AMENDMENT IS BASED

A.4 CONSTRUCTION MANAGER'S CONSULTANTS, CONTRACTORS, DESIGN PROFESSIONALS, AND SUPPLIERS

ARTICLE A.1 GUARANTEED MAXIMUM PRICE

§ A.1.1 Guaranteed Maximum Price

Pursuant to Section 3.2.6 of the Agreement, the Owner and Construction Manager hereby amend the Agreement to establish a Guaranteed Maximum Price. As agreed by the Owner and Construction Manager, the Guaranteed Maximum Price is an amount that the Contract Sum shall not exceed. The Contract Sum consists of the Construction Manager's Fee plus the Cost of the Work, as that term is defined in Article 6 of the Agreement.

§ A.1.1.1 The Contract Sum for the Early Work Package is guaranteed by the Construction Manager not to exceed Eighteen Million Dollars and No Cents (\$18,000,000). It is anticipated that the overall Phase 1 project costs will total Sixty Million Nine Hundred Thirty Thousand Five Hundred Ninety-Five Dollars and No Cents (\$60,930,595); however, the Contract Sum may not be exceeded unless additional funds have been appropriated by the City and a written amendment to this Agreement or

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Change Order has been approved by the City. The City plans to finance all amounts anticipated for the Phase 1 project that are in excess of the Contract Sum via a bond issuance in 2026. The anticipated overall Phase 1 project costs and timelines will be reevaluated and adjusted by amendment when the City has appropriated funds.

§ A.1.1.2 Itemized Statement of the Guaranteed Maximum Price. Provided below is an itemized statement of the Guaranteed Maximum Price organized by trade categories, including allowances; the Construction Manager's contingency; alternates; the Construction Manager's Fee; and other items that comprise the Guaranteed Maximum Price as defined in Section 3.2.1 of the Agreement.

(Provide itemized statement below or reference an attachment.)

Exhibit #1: City of Broomfield Water Recovery Facility Phase 1 GMP Package dated April 24, 2025.

§ A.1.1.3 The Construction Manager's Fee is set forth in Section 6.1.2 of the Agreement.

§ A.1.1.4 The method of adjustment of the Construction Manager's Fee for changes in the Work is set forth in Section 6.1.3 of the Agreement.

§ A.1.1.5 Alternates

§ A.1.1.5.1 Alternates, if any, included in the Guaranteed Maximum Price:

Item	Price
None	

§ A.1.1.5.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Exhibit A. Upon acceptance, the Owner shall issue a Modification to the Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
None		

§ A.1.1.6 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
None		

ARTICLE A.2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ A.2.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☐ The date of execution of this Amendment.

☒ Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

Commencement of the Work shall be the date of one calendar day after the Owner-signed Notice to Proceed is delivered to Construction Manager

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of execution of this Amendment.

§ A.2.2 Unless otherwise provided, the Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. The Contract Time shall be measured from the date of commencement of the Work.

§ A.2.3 Substantial Completion

§ A.2.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Construction Manager shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

☒ Not later than Eight Hundred Twenty-Two (822) calendar days from the date of commencement of the Work. Final Completion to be 90 days after substantial completion.

☐ By the following date:

§ A.2.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Construction Manager shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
N/A	

§ A.2.3.3 If the Construction Manager fails to achieve Substantial Completion as provided in this Section A.2.3, liquidated damages, if any, shall be assessed as set forth in Section 6.1.6 of the Agreement.

ARTICLE A.3 INFORMATION UPON WHICH AMENDMENT IS BASED

§ A.3.1 The Guaranteed Maximum Price and Contract Time set forth in this Amendment are based on the Contract Documents and the following:

§ A.3.1.1 The following Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
None			

§ A.3.1.2 The following Specifications:

(Either list the Specifications here, or refer to an exhibit attached to this Amendment.)

Broomfield Water Recovery Phase 1 Improvements Issued for permitting set dated February 2025 Volumes 1-3, As they pertain to the Early Work Package.

Section	Title	Date	Pages
X	Issued for permitting plans and specifications	February 2025	Volumes 1-3 Pages 1-956 and addendums 1-4

And the Current Edition of Broomfield Standard and Specifications August 2021

§ A.3.1.3 The following Drawings:

(Either list the Drawings here, or refer to an exhibit attached to this Amendment.)

Broomfield Water Recovery Facility Phase 1 Improvements issued for permitting set, As they pertain to the Early Work Package.

Number	Title	Date
1-377	Broomfield Water Recovery Facility Phase 1 Improvements issued for permitting set	February 2025

§ A.3.1.4 Not used

(Paragraph Deleted)

(Table Deleted)

Init.

(Paragraph Deleted)

§ A.3.1.5 Allowances, if any, included in the Guaranteed Maximum Price:
(Identify each allowance.)

Item	Price Included in the GMP Package dated April 24, 2025 Exhibit #1
------	---

§ A.3.1.6 Assumptions and clarifications, if any, upon which the Guaranteed Maximum Price is based:
(Identify each assumption and clarification.)

Tab 2 of exhibit #1 GMP package dated April 24, 2025

§ A.3.1.7 The Guaranteed Maximum Price is based upon the following other documents and information:
(List any other documents or information here, or refer to an exhibit attached to this Amendment.)

None

ARTICLE A.4 CONSTRUCTION MANAGER'S CONSULTANTS, CONTRACTORS, DESIGN PROFESSIONALS, AND SUPPLIERS

§ A.4.1 The Construction Manager shall retain the consultants, contractors, design professionals, and suppliers, identified below:
(List name, discipline, address, and other information.)

Not Applicable

Article A.5 - Additional Provisions for Compliance with Colorado Law. The Parties agree that the following additional provisions are hereby incorporated into the Agreement and shall be incorporated consistent with Colorado law:

COLORADO LABOR. If the contract price exceeds \$500,000, the Construction Manager shall employ not less than eighty percent of Colorado labor of each type or class of labor in the several classifications of skilled and common labor to perform the work under this Agreement in accordance with the provisions of C.R.S. §8-17-101 et seq.

INDEPENDENT CONTRACTOR. The Construction Manager is an independent contractor as provided in C.R.S. § 8-40-202(2). The Construction Manager is not entitled to workers' compensation benefits and the Construction Manager is obligated to pay federal and state income tax on monies earned pursuant to this Agreement.

FINAL PAYMENT. Upon satisfactory completion of the Work, the City Representative will provide the Construction Manager with a written acceptance of the Work as set forth in the Agreement. Final payment shall not be made until the City Representative has approved the payment and a notice of contractor's settlement has been published in accordance with C.R.S. §38-26-107. The City shall condition publication and final settlement upon receipt of any duly executed approvals of the corporate surety or sureties issuing the bonds required hereunder. Such final settlement shall be advertised as provided by statute at least twice, the last publication appearing at least ten (10) days prior to the date of final settlement. On the date of final settlement (or such later date as may be permitted by statute if claims are asserted or litigation is commenced alleging nonpayment of funds due for labor, materials, supplies, etc.), payment and final settlement shall be made in full.

OFFICIALS NOT TO BENEFIT. No elected or employed member of City government shall directly or indirectly be paid or receive any share or part of this Agreement or any benefit that may arise therefrom. The Construction Manager warrants that it has not retained any entity or person, other than a bona fide employee working solely for the Construction Manager, to solicit or secure this Agreement.

CHANGE ORDERS. Except as provided below and as provided in C.R.S. 24-91-103.6, the City shall have no duty or obligation whatsoever to compensate or to reimburse the Construction Manager for any additional work not specifically authorized as provided herein. In the event (i) the City requires additional compensable work to be performed by the Construction Manager prior to the execution or other finalization of a change order or contract amendment, and (ii) the Construction Manager has submitted to the City an estimate of the cost for the additional compensable work, then the City shall reimburse the Construction Manager for the costs associated with such additional work on a periodic basis in accordance with the terms of this Agreement and its amendments.

LIQUIDATED DAMAGES. Time is of the essence in completing the Work. Alternatively, and in lieu of actual damages for delay, in the event of delay in the completion of the Work as specified beyond the Completion Date, it would be difficult to determine the exact amount of the loss or damages suffered by the City due to delays in completion of the Work. However, the City has attempted to forecast a reasonable daily amount as compensation for the damages incurred due to late completion caused by the Construction Manager, based upon considerations which include, but are not limited to, public inconvenience and additional contract administration costs. Therefore, the Construction Manager will be liable to the City, as liquidated damages (and not as a penalty), in the amount of \$2,000 for each and every calendar day beyond the Completion Date. The City reserves the right to deduct said liquidated damages from any amount due the Construction Manager under this Agreement or, at its option, to collect such liquidated damages directly from the Construction Manager or its surety.

This Amendment to the Agreement entered into as of the day and year first written above.

OWNER (Signature)

(Printed name and title)


CONSTRUCTION MANAGER (Signature)

 Northern Division Manager
(Printed name and title)

EXHIBIT #1



**CITY AND COUNTY OF BROOMFIELD
WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS**

GMP – Rev #1
April 24, 2025

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**CITY AND COUNTY OF BROOMFIELD
WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS**

GMP - Rev #1
April 24, 2025

Construction Costs			
00	General Requirements	\$	6,583,045
01	Selective Alterations and Demo	\$	3,227,123
02	Existing Conditions	\$	120,006
03	Concrete	\$	13,434,628
04	Masonry	\$	1,106,365
05	Metals	\$	639,989
06	Woods, Plastics, & Composites	\$	150,223
07	Thermal & Moisture Protection	\$	392,765
08	Openings	\$	100,173
09	Finishes	\$	807,500
10	Specialties	\$	23,820
22	Plumbing	\$	217,351
23	HVAC	\$	1,030,069
26	Electrical	\$	7,512,417
31	Earthwork	\$	4,206,893
32	Exterior Improvements	\$	840,069
33	Utilities	\$	395,206
40	Process Integration	\$	6,069,862
41	Material Processing and Handling Equipment	\$	186,358
43	Process Gas & Liquid Handling, Purification, and Storage Equipment	\$	2,042,740
46	Water and Wastewater Equipment	\$	6,649,416
Total Construction Costs*		\$	55,736,018
VE Savings (Included in Total Construction Costs)		\$	2,553,167
Subtotal		\$	53,182,851
Construction Manager Fee		7.50%	\$ 3,988,714
Subtotal		\$	57,171,565
Bonds & Insurance		1.50%	\$ 857,573
TOTAL		\$	58,029,138
Contingency		5.00%	\$ 2,901,457
TOTAL INCLUDING Contingency		\$	60,930,595

Total Early Work Package price of \$18,000,000 per scope item #1 of the assumptions



CITY AND COUNTY OF BROOMFIELD WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS

GMP – Rev #1

APRIL 24, 2025

Assumption, Clarifications and Exceptions:

1. Early Work Package scope to include: EWP amount \$18,000,000
 - Mobilization and set up of construction office and staging
 - Rerouting 14" Willow Run force main
 - Excavation of the EQ basin and Primary Clarifier
 - Installation for Drilled Piers at the EQ basin, Primary Clarifier and West Sludge Pump Station
 - Installation of concrete slabs at the EQ Pump Station and Primary Clarifier
 - Installation and set up of Storm water management system for construction
 - Demolition of EQ Pump station
 - Installation of micro piles at EQ pump station
 - Installation of temporary post and lagging shoring at Primary Clarifier
 - Installation of under slab pipe, encasement and center column of primary clarifier
 - Procurement of the below listed equipment
 - Blowers, EQ Pumps, Primary and secondary clarifier mechanisms, Generator, Motor Control Centers, VFD's, and primary electrical panels
 - Submittal packages for progressive cavity pumps, vertical turbine pumps, coarse bubble mixing system and primary clarifier FRP covers
2. GMP Package based on the Drawings dated February 2025 and bearing the title "Broomfield Water Recovery Facility Phase I Improvements, Issued for Permitting", Specifications dated February and bearing the title "Broomfield Water Recovery Facility Phase I Improvements, Issued for Permitting", Addendums #1, #2, #3, and #4
3. Moltz did not include any building permit fees or right of way fees. Permit fees for temp. job trailer, State stormwater and State dewatering permit fees are included. Moltz will put together plans, get any necessary licenses, and help procure the permits but we did not carry any fees for these permits.
4. Moltz has assumed Contract duration is reflected in attached CPM schedule.
5. The Contract Sum is based upon and governed by laws, tariffs, and governmental regulations existing and enacted as of the date of the execution of this Agreement. Any subsequent change in laws, duties, taxes, tariffs and/or governmental regulations ("Change in Law") impacting the cost or time for performance of the Work shall entitle Contractor to an adjustment to the Contract Sum and Contract Time.
6. Moltz included \$282,210 to replace admin chiller per HVAC quote.
7. Moltz included \$185,000 for sludge hauling required to remove sludge from Primary Clarifier #3 prior to construction.
8. Not Used.
9. Moltz did not include a specialized scheduler for this project per the specifications. Moltz will provide a full CPM schedule and monthly updates to the CPM schedule from the project team who understand the project best. Moltz does not intend to use the cost loaded schedule for billing per the specifications. Moltz will bill per the AIA contract with Broomfield. Moltz did not include labor histogram. Equipment billings will be provided in the payment applications per the RFP rates. Moltz has not included a commissioning schedule



-
14. Due to schedule concerns Moltz cannot wait to do a water test if the 10-day weather forecast indicates weather change per 01 75 19. The project team will work with engineers to quantify moisture with a pan.
 15. Moltz did not plan on having a flow meter with 24-hour monitoring, calibrated by a Professional Engineer, and housed in a NEMA 4X enclosure per dewatering spec 31 23 19, Paragraph 3.03. Moltz will monitor groundwater flow and permitting per the state permit requirements, not the specifications.
 16. Moltz does not plan on extra monitoring wells checked per week as per the dewatering specification.
 17. Moltz did not include the infiltration pond percolation test per the specifications.
 18. Moltz included standard CLSM. We cannot guarantee or test the CLSM to be between 50-150 psi. Moltz did not plan on having Air entrainment in the CLSM. Moltz did not include trial batches for CLSM and excluded testing for CLSM per spec 31 23 24, Paragraph 3.07.
 19. Moltz did not include a SUE per Specification 31 23 35 for all trenching. Moltz will pothole any known utilities and do our due diligence in locating utilities ahead trenching but cannot meet the specification requirements.
 20. Moltz assumes water testing crack injection can be completed with Urethane resin in lieu of Epoxy resin.
 21. Moltz assumes the overflow sludge pond can be used for dirt storage.
 22. Moltz assumes on-site material is acceptable for use as general backfill.
 23. Moltz did not follow spec 03 11 11, Paragraph 3.02.E.1. We do not know how to make cracks in geofoam watertight.
 24. Moltz will selectively demo the existing stairway at EQ Pump Station to complete the installation of concrete and micropiles. The entire stairway will not be removed.
 25. Specification list equipment manufacturers to be used for the GMP estimate. Table 1 lists the equipment manufacturer and associated cost that were included in the GMP estimate, along with alternates manufacturers and associated pricing.



TABLE 1 – PROJECT EQUIPMENT

Equipment	Included Manufacturer	Alternate Manufacturer	Alternate Manufacturer	Alternate Manufacturer
	Included Price	Price	Price	Price
Turbo Blowers	Sulzer	----	----	----
	\$725,890	----	----	----
Self-Priming Centrifugal Pump	Groman Rupp	WEMCO**	----	----
	\$249,170	\$199,805	----	----
Progressive Cavity Pumps	Netsch	Moyno		
	\$168,115	\$252,386		
Vertical Turbine Pumps	Flowserve	ITT/Goulds	Peerless	----
	\$722,308	\$993,839	\$1,227,607	----
In-line Grinder	JWC	Moyno	Franklin Miller**	----
	\$97,057	\$102,241	\$103,643	----
Large Bubble Mixing System	Enviromix	Pulse Hydraulics	----	----
Rotary Screw Compressor	Ingersoll Rand	Ingersoll Rand		
	\$794,190	\$918,275	----	----
Primary Clarifier	WesTech	----	----	----
	\$2,082,635	----	----	----
Secondary Clarifiers	WesTech	----	----	----
	Included above	----	----	----
FRP Clarifier Covers	Enduro	NEFCO**	----	----
	\$1,686,800	\$1,431,000	----	----
Odor Control System	Biorem	Perry Fiberglass	ECS Municipal	Daniel Mechanical **
	\$1,242,325	\$1,258,375	\$1,638,400	\$1,658,375

** Not a named manufacturer

26. Blowers:

- a. Service Agreements excluded. Sulzer does not offer such contracts.
- b. Will provide a local-operator-interface that was UL approved with the blower package.
- c. In-person witnessed Source Testing excluded.

27. Vertical Turbine Pumps:

- a. Pump ability to pass a 3" sphere is excluded.
- b. Pump efficiency at design point is 79%.
- c. Rotodynamic Analysis report will not be sealed by a Professional Engineer. An expert is not required by specification.
- d. Variable speed pump curves will be developed with pump Affinity Laws and field verified during Commissioning.



28. Sump Pumps:

- a. Sump pumps are shelf items and special factory testing is not available and excluded.
- b. Rotodynamic analysis is excluded.

29. Bubble Mixing System:

- a. Not Used.

30. Primary Clarifier:

- a. WesTech will not design the equipment to meet the requirement that not more than 60% of horizontal deflection shall be due to cage twist. Because of the length of the rake arms, even small amounts of cage twist in the cage are amplified when looking at deflection at the outer edge of rake arms. This design condition is excluded.
- b. WesTech will be supplying a continuous torque of 25,000 ft-lbs., meeting the intent of the specified torque of 22,563 ft-lbs.
- c. WesTech will be supplying dual-gate EDI which offers impinged flow as opposed to specified tangential flow.

31. Secondary Clarifiers:

- a. WesTech will not design the equipment to meet the requirement that not more than 60% of horizontal deflection shall be due to cage twist. Because of the length of the rake arms, even small amounts of cage twist in the cage are amplified when looking at deflection at the outer edge of rake arms. This design condition is excluded.
- b. WesTech will be supplying a continuous torque of 25,000 ft-lbs., meeting the intent of the specified torques of 18,063 ft-lbs. and 16,000 ft-lbs.
- c. WesTech will be supplying dual-gate EDI which offers impinged flow as opposed to specified tangential flow.

32. FRP Clarifier Cover:

- a. Scum beach hatch will be supplied as a 19"X24" hatch because it is not possible for the proper sub-framing to be installed for a 6'X6' hatch at this location.
- b. Exclude specified design criteria and will follow design criteria used to design Primary Clarifier #3 FRP covers.
- c. Manufacturer FRP products are made with UV stabilizers in standard charcoal grey color to increase the resistance of UV radiation in lieu of other colors.

33. FRP Biofilter Cover:

- a. Manufacturer FRP products are made with UV stabilizers in standard charcoal grey color to increase the resistance of UV radiation in lieu of other colors.

34. Moltz is excluding the welded studs anchors on the EQ Basin veneer support angles. Support angles will be secured with post installed anchors.

35. Moltz assumed that insulation will be installed on the new blower discharge piping up to the point where the new blower pipe is connected to the existing blower pipe. No insulation will be installed on the existing blower discharge pipe.

36. Moltz has excluded Paragraph 1.04.C of Specification 40 05 19.01 -Ductile Iron Pipe: AWWA C151

37. Moltz has assumed standard AWWA C151 (pipe) and AWWA C153 (fittings) coatings on all buried and concrete encased metallic pipe, fittings and valves. Coating system in Specification 09 96 01, Attachment B-5 is excluded.



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38. Moltz has assumed that interior DIP and fitting will have a surface preparation in accordance with NAPF 500 – standard for DI surfaces. SSPC-10, near white blast on DIP will damage the surface causing short- and long-term adhesion and cohesion problems. SSPC-10 surface preparation of DI surfaces is excluded.
 39. Moltz has assumed field welded joints for fabricated stainless steel pipe on one side where the pipe passes through a floor, wall or roof.
 40. Secondary Clarifier #3 and #4, Moltz has excluded heat trace and insulation on the 1" NPW line attached to the clarifier walkway.
 41. EQ Valve Vault – Moltz has assumed the wall penetration for the 16" pipe will be wall sleeves and link seals.
 42. Drawing Sheet 00D01, Procedure Note 9: Moltz will be using gravity for aiding in Demolition.
 43. Specification 02 65 00, Paragraph 2.01.A: Moltz assumes 300 gallons or less of Diesel Fuel to be disposed of. If Diesel Fuel is contaminated, additional environmental management, not included in the GMP, will be required.
 44. Bollards not shown around the proposed emergency generator. Moltz has included 8 EA additional bollards around the proposed emergency generator.
 45. Bollards not shown at the overhead door of the West Primary Sludge Pump Station. Moltz has included 2 EA additional bollards, one either side of the West Primary Sludge Pump Station overhead door opening.
 46. Specification 07 53 23, Paragraph 1.4.D: Moltz is excluding the concrete internal relative humidity test report.
 47. Moltz has included a 90-mil thick roof membrane material in lieu of the specified 60 mil thickness. Membrane manufacturer requires 90 mil thickness to meet the 30-year warranty requirement.
 48. Specification 07 62 00: For sheet metal, Moltz has only included manufacturers standard colors in GMP.
 49. Moltz has assumed there is no SCADA or BAS controls for HVAC systems.
 50. Moltz has assumed no Security, CCTV, access control equipment beyond the 3 card readers at the front gates.
 51. Moltz has assumed the roof drains on the EQ Basin will have a "duckbill" style check valve (Tideflex or similar) installed on each drain.

Constructability Considerations:

1. Moltz believes 4 EA additional caissons need to be placed under encased piping at clarifiers.
2. Moltz would like to propose the concrete shear wall at Reuse Electrical Room (45S04) stays 12" to top of parapet.
3. Moltz proposes the generator pad be thickened at the South end due to the slope of the rock in that area.
4. Increase Primary Clarifier #4 wall thickness to 14".
5. Moltz has concerns about 18" diameter, 50 ft long caissons. The diameter will make it a challenge to insert a tremie pipe to the bottom of the caisson.
6. Moltz plans on placing a horizontal control joint at grade beam/slab connection at EQ Equipment Room, West Sludge Pump Station, and Reuse Electrical Room.
7. Moltz has concerns with potential conflicts between grade beams and electrical conduit entry into the MCC equipment.



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CITY OF BROOMFIELD
WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS
Value Engineering Tracking
4/24/2025 - GMP - Rev #1

					Accepted By:			Notes
Description		Estimated	Final	Action	Broomfield	Carollo	Moltz	
1	Provide standard clarifier scum baffle mounting detail in lieu of specified	\$ (234,000.00)	\$ (234,000.00)	Approved	X	X	X	Moltz will forward West Tech standard wier detail to Carollo
2	EQ pumps - Eliminate witnessed Source Testing travel requirement	\$ (16,000.00)	\$ (16,000.00)	Approved	X	X	X	No witness test needed
3	Vertical Turbine Pumps - Eliminate witnessed Source Testing travel requirement	\$ (20,000.00)	\$ (20,000.00)	Approved	X	X	X	If factory test is wanted Carollo will attend with no travel cost
4	Odor Control System - eliminate the specified (Div. 40) control panel spare parts	\$ (20,000.00)	\$ (20,000.00)	Approved	X	X	X	Biorem's spare parts for this is \$20,000
5	Delete EQ pump Station demolition from phase 1. Dewatering and shoring may not be needed in phase 2 an should be much less expensive.	\$ (1,036,183.00)	\$ (1,036,183.00)	Approved	X	X	X	Allows dewatering and shoring for Phase 2 to be in place before demolition to minimize cost for doing seperatly. Will be pushed to Phase 2 if needed.
6	Delete tie hole CJ roughening, epoxy gel and epoxy bonding agent on tie holes	\$ (27,000.00)	\$ (6,275.00)	Partially Approved	X	X	X	Moltz deleted on non water retaining structures only.
7	Use atlas geofoam EPS 15 in place of atlas geofoam 46 at EQ pump station	\$ (62,000.00)	\$ (62,000.00)	Approved	X	X	X	
8	Use plastic chair or rubber tipped carbon steel chairs and slab bolster in place of Stainless steel for rebar support.	\$ (45,000.00)	\$ (45,000.00)	Approved	X	X	X	Carollo has approved as long as Moltz can get proper consolidation around chairs due to size.
9	Use 12" swing check with cushion chamber in place of 12" tilting disk check valves 4 ea. reuse 4ea EQ pump	\$ (144,000.00)	\$ (144,000.00)	Approved	X	X	X	
10	Delete epoxy bonding agent at pump pads, CJ roughen 1" under pump pads and epoxy bonding agent at existing concrete to new concrete connections.	\$ (17,000.00)		Not Approved				Most palces equiupmnet pads can be left rough during finishing with 1/4" bushing. New pad on existing concrete may need bonding agent and Carollo checking bonding agent at EQ pump Station walls. Will be looked at on case by case basis to see if saving can be achieved at later date.
11	Delete raised keyway at Walls. (this is QC issue also)	\$ (32,000.00)		Not Approved				Moltz and Carollo to look at this during first pour to see if a 2X4 at rebar or floating waterstop in can be done but VE is not approved.
12	Delete 10 mil vapor barrier at concrete encasement (don't believe this is needed)	\$ (2,700.00)	\$ (2,700.00)	Approved	X	X	X	
13	Delete License Surveyor for before construction survey, and caisson verification requirements	\$ (41,620.00)	\$ (25,620.00)	Approved	X	X	X	Moltz to submit Caisson survey for varification but lisencc survey is not needed for Caissons. Will still include preconstruction survey.
14	Delete high performance coating on clarifier #4 trough	\$ (154,000.00)		Not Approved				
15	Delete Dewatering independent design requirements from spec	\$ (30,000.00)	\$ -	Not Approved	X	X	X	
16	Delete backflow preventer on NPW at Odor control	\$ (1,324.00)	\$ (1,324.00)	Approved	X	X	X	
17	Delete coatings on concrete at liquid stream tank at Odor Control	\$ (87,000.00)	\$ (87,000.00)	Approved	X	X	X	This coating is to be deleted. Liner is included with odor control equipment.



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CITY OF BROOMFIELD
WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS
Value Engineering Tracking
4/24/2025 - GMP - Rev #1

					Accepted By:			Notes
Description		Estimated	Final	Action	Broomfield	Carollo	Moltz	
18	Delete specification requirement for full time QA/QC Representative. Carollo to work with on site Super and field engineer to ensure QC is	\$ (201,565.00)	\$ (201,565.00)	Approved	X	X	X	Field Engineer and Superintendent will perform QA/QC duties
19	Delete specification for Start up and Commissioning Specialist	\$ (201,500.00)	\$ (201,500.00)	Approved	X	X	X	Project team will start up project.
20	Delete allowance for Hazardous materials	\$ (200,000.00)	\$ (200,000.00)	Approved	X	X	X	Hazardous materials will be handled with contingency or change order if they occur. This allowance is deleted.
21	Delete contractor required material testing (specs call for some owner and some contractor)	\$ (65,000.00)	\$ (65,000.00)	Approved	X	X	X	Broomfield will pay for materials testing
22	Delete requirement for engineered Thermal Engineering study for concrete per specifications.	\$ (42,000.00)		Not Approved				This will be discussed in concrete precon before start of construction
23	Delete requirement to jet, clean and camera abandoned lines	\$ (30,000.00)	\$ (30,000.00)	Approved	X	X	X	This will be done but Broomfield will assist with jet truck and vac truck
24	Delete contractor paid witness testing and expenses	\$ (56,000.00)	\$ (56,000.00)	Approved	X	X	X	Contractor paid travel expenses for witness testing is not not reured.
25	Delete requirement for special photos, and professional videographer for preconstruction video, trainings etc.	\$ (55,000.00)	\$ (55,000.00)	Approved	X	X	X	Moltz will video trainings, include daily pictures and some drone photos as needed.
26	Delete XYPEX Biosan from EQ Basin Walls and Decks	\$ (515,070.00)		Not Approved				
27	Use 22 gauge SS dovetail slot in place of 16 gauge SS (saving even more if non stainless or post installed anchors are allowed)	\$ (33,000.00)		Not Approved				
28	Leave 6500 cy of dirt on site in the Overflow pond in place of hauling off	\$ (169,000.00)		Not Approved				
29	Use alternative1 ton hoist in place of spec hoist. Alt model Harrington model NER2M100LD-LD	\$ (40,000.00)	\$ (40,000.00)	Approved				
30	Use Holcim Mix 7456749 mix in place of specified mix design (as best we can meet it with the 7456749S mix)	\$ (36,700.00)		Not Approved				
31	Eliminate Weir Structure coating	\$ (89,000.00)	\$ (89,000.00)	Approved				Existing Concrete seems to be in good shape. Full inspection will be done during construcion once splitter is out of service. Assume no coatings needed.
32	Eliminate EQ Pump Station wetwell coating	\$ (67,000.00)		Not Approved				
33	Delete bell harness restraints on gravity and encased pipelines			Not Approved				Carollo to look at lines to see if this is possible.
34	Use Enviromix VS PHI for Coarse Bubble system	\$ 125,000.00	\$ 125,000.00	Approved	X	X	X	System more consistent with design
35	Delete Stucco allowance for Primary Clarifier #4	\$ (40,000.00)	\$ (40,000.00)	Approved	X	X	X	
35								
Total Adjustment to Costs Subject to Contractor's Fee		\$ (3,685,662.00)	\$ (2,553,167.00)					



**CITY AND COUNTY OF BROOMFIELD
WATER RECOVERY FACILITY PHASE 1 IMPROVEMENTS**

GMP – Rev #1
APRIL 24, 2025

Provided in Separate File

See .pdf file titled “04 Quotes All”

Project name	Broomfield WRF - Ph1 GMP
Labor rate table	Labor - Raw (MCI)
Equipment rate table	Equipment - MCI
Report format	Sorted by 'Spec #/Area/System/Assembly' 'Detail' summary

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
010000.00	General Requirements												
00 - GEN	General												
GEN	General												
01	-100 General Conditions												
	Senior Project Manager	1006.100	32.00 wks	/wks		/wks			/wks		186,816	186,816	186,816
	Project Manager	1006.100	130.00 wk	-	-	/wk			75.00 /ea	9,750	559,000	568,750	568,750
	Project Engineer	1006.100	195.00 wk	-	-	/wk			75.00 /ea	14,625	542,100	556,725	556,725
	Construction Manager	1022.100	130.00 wk	3,650.00 /wk	474,500	/wk			/ea			474,500	688,025
	Superintendent	1022.100	130.00 wk	3,075.00 /wk	399,750	/wk			/ea			399,750	579,638
	Assistant Superintendent	1022.100	65.00 wk	2,115.00 /wk	137,475	/wk			/ea			137,475	199,339
	QA/QC Representative Specialist	1006.100	130.00 wk	-	-	/wk			50.00 /wk	6,500	396,630	403,130	403,130
	Field Engineer	1630.100	130.00 wk	2,000.00 /wk	260,000	/wk			/wk			260,000	377,000
	Rodman	1630.100	85.00 wk	1,200.00 /wk	102,000	/wk			/ea			102,000	147,900
	Project Coordinator	1014.100	16.00 wk	/wk		/wk			/wk		35,584	35,584	35,584
	Warehouse Foreman	1000.100	104.00 wk	1,600.00 /wk	166,400	/wk			/wk			166,400	241,280
	Pickup	1900.210	104.00 Mnth	/Mnth		/Mnth			1,900.00 /Mnth	197,600	52,000	249,600	249,600
	Project Signs 4x8	1614.100	1.00 ea	39.25 /mh	942	1,500.00 /ea	1,500		/ea			2,442	2,866
	Per Diem	1642.100	130.00 wk	39.25 /mh		/wk			/mh		190,000	190,000	190,000
	Safety Manager	1116.100	20.00 wk	-	-	/wk			/ea		86,000	86,000	86,000
	Jobsite Safety Manager	1116.100	32.00 wk	2,115.00 /wk	67,680	/wk			/wk			67,680	98,136
	Safety	1116.100	1.00 ls	/ls		30,000.00 /ls	30,000		/ls			30,000	30,000
	Temporary Fencing with screening material	1116.200	1.00 ls	/ls		45,000.00 /ls	45,000		/ls			45,000	45,000
	Site Security/Alarm System	1644.100	30.00 Mnth	39.25 /mh	11,775	1,000.00 /Mnth	30,000		/Mnth			41,775	47,074
	Temporary Power Hookup trailers	1162.100	1.00 ls	/ls		25,000.00 /ls	25,000		/ls			25,000	25,000
	Telephone/Internet Charges	1162.100	30.00 Mnth	/Mnth		250.00 /Mnth	7,500		/Mnth			7,500	7,500
	Temporary Toilets	1162.100	240.00 Mnth	/Mnth		250.00 /Mnth	60,000		/Mnth			60,000	60,000
	Cell Phone	1162.100	120.00 Mnth	/Mnth		/Mnth			75.00 /Mnth	9,000		9,000	9,000
	Radios	1162.100	30.00 Mnth	/Mnth		200.00 /Mnth	6,000		/Mnth			6,000	6,000
	Project Management Software	1672.200	30.00 Mnth	/Mnth		/Mnth			/Mnth		60,000	60,000	60,000
	Drinking Water	1162.100	1.00 ls	/ls		10,000.00 /ls	10,000		/ls			10,000	10,000
	Permit - Building - by LS trailers	1222.100	1.00 ls	/ls		1,500.00 /ls	1,500		/ls			1,500	1,500
	Documents - Freight and Postage	1060.100	1.00 ls	/ls		10,000.00 /ls	10,000		/ls			10,000	10,000
	Photos - Project by GC (Moltz Standard)	1104.100	30.00 mnth	39.25 /mh	18,840	450.00 /mnth	13,500	10,000	/mnth			42,340	50,818
	Survey Equipment, Project	1630.100	30.00 Mnth	/Mnth		500.00 /Mnth	15,000		2,500.00 /Mnth	75,000		90,000	90,000
	Staging Area Rock	2305.250	300.00 bcy	39.25 /mh	2,355	38.00 /ton	18,240		/cy			20,595	21,655
	(3rd Party) Truck and Trailer	1900.210	300.00 Hrs	/Hrs		/Hrs		18,000	/Hrs			18,000	18,000
	(3rd Party) Semi Tractor	1900.210	320.00 Hrs	/Hrs		/Hrs		52,800	/Hrs			52,800	52,800
	Mob & Demob Labor	1900.210	480.00 hr	39.25 /mh	18,840	/hr			/hr			18,840	27,318
	Final Cleaning	1714.100	320.00 hrs	39.25 /mh	12,560	10.00 /hrs	3,200		/mh			15,760	21,412
	Dumpster Rental/Pick up	1714.100	130.00 Wk	/Wk		650.00 /Wk	84,500		/Wk			84,500	84,500
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		2,500.00 /ls	2,500		2,500.00 /ls	2,500		5,000	5,000
	Drug Testing	1116.100	1.00 ls	/ls		2,500.00 /ls	2,500		/ls			2,500	2,500
	Advertising	1642.100	1.00 ls	/ls		/ls			/ls		8,000	8,000	8,000
	Conc Jersey Barriers	1644.100	24.00 Mnth	39.25 /mh		0.00 /Mnth	0		250.00 /Mnth	6,000		6,000	6,000
	Water Meter Flange with backflow	15403.350	1.00 ea	39.25 /mh	628	5,000.00 /ea	5,000		/ea			5,628	5,911
	Survey & Layouts control	1630.100	1.00 ls	39.25 /mh		0.00 /ls	0	5,000	/ls			5,000	5,000
	Start up and Commissioning specialst (01_75_17 spec)	1006.100	52.00 wk	-	-	/wk			0.00 /wk	0	201,500	201,500	201,500
	General Conditions		104.00 wk		1,673,745		370,940	85,800		320,975	2,317,630	4,769,090	5,522,275
	GEN General				1,673,745		370,940	85,800		320,975	2,317,630	4,769,090	5,522,275
	SITE Sitework												
01	-100 Allowances SPEC 01_21_00												
	Irrigation Installation	1060.100	1.00 ls	/ls		/ls			/ls		50,000	50,000	50,000
	Hazard Material Allowance Per Spec	1060.100	1.00 ls	/ls		/ls			/ls		200,000	200,000	200,000
	Material Testing Sub by contractor only	1166.100	1.00 ls	/ls		/ls		65,000	/ls			65,000	65,000
	Professional surveyor per 01_71_23	1500.100	1.00 ls	/ls		/ls		33,440	/ls			33,440	33,440
	HVAC Subcontractor for admin chiller	15402.010	1.00 ls	39.25 /mh	4,710	15,000.00 /ls	15,000	260,000	/mh		2,500	282,210	284,330
	Sludge Haul from Primary Clarifiers (650,000 gal)	2240.050	1.00 ls	/ls		/ls		185,000	/ls			185,000	185,000
	Sub Thermal Engineering Study	1630.100	1.00 ls	/ls		/ls		42,000	/ls			42,000	42,000
	X ray for conduit and rebar	2317.105	1.00 ls	/ls		/ls		20,000	/ls			20,000	20,000
	Jet and Video lines to be abandon	1500.100	1.00 ls	/ls		/ls		30,000	/ls			30,000	30,000
	Stucco Subcontractor for primary clarifier #4	9000.110	1.00 ls	/ls		/ls		40,000	/ls			40,000	40,000
	Witness testing (equipment) (4 ea trips @ 14,000)	1500.100	1.00 ls	/ls		/ls		56,000	/ls			56,000	56,000
	Photos - Project by GC sub	1104.100	1.00 ls	39.25 /mh		0.00 /ls	0	55,000	/ls			55,000	55,000

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Allowances SPEC 01_21_00				4,710		15,000	786,440			252,500	1,058,650	1,060,770
	SITE Sitework				4,710		15,000	786,440			252,500	1,058,650	1,060,770
	00 - GEN General				1,678,455		385,940	872,240		320,975	2,570,130	5,827,740	6,583,045
	010000.00 General Requirements				1,678,455		385,940	872,240		320,975	2,570,130	5,827,740	6,583,045
013521.00	Selective Alterations & Demolition												
	00 - SITE Site												
	DEMO Demolition												
	020- Misc Site Demolition - Fence per Note 9 on 00C02												
	Demo Chain Link Fencing	2220.735	1,000.00 lf	39.25 /mh	2,512	/lf			/lf			2,512	3,642
	Misc Site Demolition - Fence per Note 9 on 00C02		1.00 ls		2,512							2,512	3,642
	020- Misc Site Demolition - Remove & Protect Fence per Note 10 on 00C02												
	Remove & Protect Gate for Re-installation	2220.735	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Misc Site Demolition - Remove & Protect Fence per Note 10 on 00C02		1.00 ls		628							628	911
	020- Misc Site Demolition - Fence per Note 2 on 00C03												
	Demo Chain Link Fencing	2220.735	32.00 lf	39.25 /mh	1,256	/lf			/lf			1,256	1,821
	Misc Site Demolition - Fence per Note 2 on 00C03		1.00 ls		1,256							1,256	1,821
	020- Misc Site Demolition - Demo Gate per Note 14 on 00C02												
	Demo Gate Protect Electrical Conduit for Re-use	2220.735	1.00 ls	39.25 /mh	1,256	/ls			/ls			1,256	1,821
	Misc Site Demolition - Demo Gate per Note 14 on 00C02		1.00 ls		1,256							1,256	1,821
	020- Misc Site Demolition - Remove Sign per Note 15 on 00C02												
	Demo Sign at Gate	2220.735	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Misc Site Demolition - Remove Sign per Note 15 on 00C02		1.00 ls		628							628	911
	0204- Demo Conc Ductbank Key Note 2 - 00C01												
	Demo Conc Duct Bank	2220.083	14.00 cy	39.25 /mh	4,946	/cy			/cy			4,946	7,171
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mnth	250		500.00 /Mnth	125	38	413	413
	(3rd Party) Dump Truck, 10 wheel	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	26.00 tn	/tn		45.00 /tn	1,170		/tn			1,170	1,170
	Demo Conc Ductbank Key Note 2 - 00C01		14.00 cy		4,946		1,420	1,215		1,945	588	10,113	12,338
	0204- Demo Conc Sidewalk Note 3-00C01												
	Demo Conc Sidewalk	2220.083	12.30 cy	39.25 /mh	3,379	/cy			/cy			3,379	4,900
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	10	60	60
	Cut N Break Saw	1900.138	0.10 Mnth	/Mnth		1,000.00 /Mnth	100		500.00 /Mnth	50	15	165	165
	(3rd Party) Dump Truck, 10 wheel	1900.210	11.00 Hrs	/Hrs		/Hrs		1,485	/Hrs			1,485	1,485
	Dump Fees by ton	1714.100	25.00 tn	/tn		45.00 /tn	1,125		/tn			1,125	1,125
	Demo Conc Sidewalk Note 3-00C01		12.30 cy		3,379		1,225	1,485		1,920	575	8,584	10,105
	0204- Demo Asphalt - Note 4 - 00C01												
	Demo Asphalt (6558 SF x 8" Thick)	2220.083	163.00 cy	39.25 /mh	5,118	/cy			/cy			5,118	7,421
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	2,750	625	3,375	3,375
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mnth	250		500.00 /Mnth	125	38	413	413
	(3rd Party) Dump Truck, 10 wheel	1900.210	136.00 Hrs	/Hrs		/Hrs		18,360	/Hrs			18,360	18,360
	Dump Fees by ton	1714.100	319.00 tn	/tn		45.00 /tn	14,355		/tn			14,355	14,355
	Demo Asphalt - Note 4 - 00C01		163.00 cy		5,118		14,605	18,360		4,675	1,413	44,171	46,474
	0204- Demo Conc Curb & Gutter Note 6 - 00C01												
	Demo Conc Curbs	2220.083	41.00 cy	39.25 /mh	4,828	/cy			/cy			4,828	7,000
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	2,750	625	3,375	3,375
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	90 lb Jack Hammer	1900.138	0.25 Mnth	/Mnth		/Mnth			500.00 /Mnth	125	25	150	150
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mnth	250		500.00 /Mnth	125	38	413	413
	(3rd Party) Dump Truck, 10 wheel	1900.210	18.00 Hrs	/Hrs		/Hrs		2,430	/Hrs			2,430	2,430
	Dump Fees by ton	1714.100	82.00 tn	/tn		45.00 /tn	3,690		/tn			3,690	3,690
	Demo Conc Curb & Gutter Note 6 - 00C01		33.89 cy		4,828		3,940	2,430		4,800	1,438	17,435	19,608
	0204- Demo Asphalt - Note 1 - 00C03												
	Demo Asphalt	2220.083	140.60 cy	39.25 /mh	4,415	/cy			/cy			4,415	6,402
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,650	375	2,025	2,025

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0204- Demo Asphalt - Note 1 - 00C03												
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,080	450	1,530	1,530
	Cut N Break Saw	1900.138	0.15 Mnth	/Mnth		1,000.00 /Mnth	150		500.00 /Mnth	75	23	248	248
	(3rd Party) Dump Truck, 10 wheel	1900.210	118.00 Hrs	/Hrs		/Hrs		15,930	/Hrs			15,930	15,930
	Dump Fees by ton	1714.100	275.00 tn	/tn		45.00 /tn	12,375		/tn			12,375	12,375
	Demo Asphalt - Note 1 - 00C03		140.60 cy		4,415		12,525	15,930		2,805	848	36,522	38,509
	0204- Demo Conc Curbs Note 3 - 00C03												
	Demo Conc Curbs	2220.083	4.02 cy	39.25 /mh	947	/cy			/cy			947	1,373
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	90 lb Jack Hammer	1900.138	0.05 Mnth	/Mnth		/Mnth			500.00 /Mnth	25	5	30	30
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		1,000.00 /Mnth	50		500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	8.04 tn	/tn		45.00 /tn	362		/tn			362	362
	Demo Conc Curbs Note 3 - 00C03		4.02 cy		947		412	405		960	288	3,011	3,437
	0204- Demo Conc Sludge Containment Structure per Note 4 on 00C03												
	Demo Conc SOG with Rebar	2220.083	15.56 cy	39.25 /mh	3,969	/cy			/cy			3,969	5,755
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	2,750	625	3,375	3,375
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	90 lb Jack Hammer	1900.138	0.25 Mnth	/Mnth		/Mnth			500.00 /Mnth	125	25	150	150
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mnth	250		500.00 /Mnth	125	38	413	413
	(3rd Party) Dump Truck, 10 wheel	1900.210	14.00 Hrs	/Hrs		/Hrs		1,890	/Hrs			1,890	1,890
	Dump Fees by ton	1714.100	32.67 tn	/tn		45.00 /tn	1,470		/tn			1,470	1,470
	Demo Conc Sludge Containment Structure per Note 4 on 00C03		15.56 cy		3,969		1,720	1,890		4,800	1,438	13,816	15,602
	0204- Demo Conc Pavement per Note 11 on 00C01												
	Demo Conc SOG with Rebar	2220.083	7.72 cy	39.25 /mh	1,212	/cy			/cy			1,212	1,757
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	90 lb Jack Hammer	1900.138	0.05 Mnth	/Mnth		/Mnth			500.00 /Mnth	25	5	30	30
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		1,000.00 /Mnth	50		500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	6.00 Hrs	/Hrs		/Hrs		810	/Hrs			810	810
	Dump Fees by ton	1714.100	15.44 tn	/tn		45.00 /tn	695		/tn			695	695
	Demo Conc Pavement per Note 11 on 00C01		7.72 cy		1,212		745	810		960	288	4,014	4,560
	0204- Demo Conc Valley Pan per Note 12 on 00C01												
	Demo Conc SOG with Rebar	2220.083	2.00 cy	39.25 /mh	314	/cy			/cy			314	455
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	90 lb Jack Hammer	1900.138	0.05 Mnth	/Mnth		/Mnth			500.00 /Mnth	25	5	30	30
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		1,000.00 /Mnth	50		500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	4.00 tn	/tn		45.00 /tn	180		/tn			180	180
	Demo Conc Valley Pan per Note 12 on 00C01		2.00 cy		314		230	405		960	288	2,197	2,338
	0204- Demo Conc Ductbank Key Note 2 - 00C02												
	Demo Conc Duct Bank	2220.083	7.50 cy	39.25 /mh	1,472	/cy			/cy			1,472	2,134
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		1,000.00 /Mnth	50		500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	6.00 Hrs	/Hrs		/Hrs		810	/Hrs			810	810
	Dump Fees by ton	1714.100	15.00 tn	/tn		45.00 /tn	675		/tn			675	675
	Demo Conc Ductbank Key Note 2 - 00C02		7.50 cy		1,472		725	810		935	283	4,224	4,887
	0204- Demo Conc Sidewalk Note 5-00C02												
	Demo Conc Sidewalk (2317 SF)	2220.083	28.30 cy	39.25 /mh	4,998	/cy			/cy			4,998	7,248
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	2,750	625	3,375	3,375
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0204- Demo Conc Sidewalk Note 5-00C02												
	90 lb Jack Hammer	1900.138	0.25 Mnth	/Mnth		/Mnth			500.00 /Mnth	125	25	150	150
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mnth	250		500.00 /Mnth	125	38	413	413
	(3rd Party) Dump Truck, 10 wheel	1900.210	24.00 Hrs	/Hrs		/Hrs		3,240	/Hrs			3,240	3,240
	Dump Fees by ton	1714.100	56.60 tn	/tn		45.00 /tn	2,547		/tn			2,547	2,547
	Demo Conc Sidewalk Note 5-00C02		28.30 cy		4,998		2,797	3,240		4,800	1,438	17,273	19,522
	0204- Demo Asphalt - Note 6 - 00C02												
	Demo Asphalt (6558 SF x 8" Thick)	2220.083	473.00 cy	39.25 /mh	12,624	/cy			/cy			12,624	18,305
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	5,500	1,250	6,750	6,750
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Cut N Break Saw	1900.138	0.50 Mnth	/Mnth		1,000.00 /Mnth	500		500.00 /Mnth	250	75	825	825
	(3rd Party) Dump Truck, 10 wheel	1900.210	203.00 Hrs	/Hrs		/Hrs		27,405	/Hrs			27,405	27,405
	Dump Fees by ton	1714.100	946.00 tn	/tn		10.00 /tn	9,460		/tn			9,460	9,460
	Demo Asphalt - Note 6 - 00C02		443.00 cy		12,624		9,960	27,405		9,350	2,825	62,164	67,845
	0204- Demo Conc Curb & Gutter Note 12 - 00C02												
	Demo Conc Curbs	2220.083	104.00 cy	39.25 /mh	11,430	/cy			/cy			11,430	16,573
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.35 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	3,850	875	4,725	4,725
	John Deere 624 Loader (172 HP) (M)	1900.132	0.35 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	2,520	1,050	3,570	3,570
	90 lb Jack Hammer	1900.138	0.35 Mnth	/Mnth		/Mnth			500.00 /Mnth	175	35	210	210
	Cut N Break Saw	1900.138	0.35 Mnth	/Mnth		1,000.00 /Mnth	350		500.00 /Mnth	175	53	578	578
	(3rd Party) Dump Truck, 10 wheel	1900.210	45.00 Hrs	/Hrs		/Hrs		6,075	/Hrs			6,075	6,075
	Dump Fees by ton	1714.100	208.00 tn	/tn		45.00 /tn	9,360		/tn			9,360	9,360
	Demo Conc Curb & Gutter Note 12 - 00C02		96.18 cy		11,430		9,710	6,075		6,720	2,013	35,947	41,090
	0204- Demo Conc Valley Pan per Note 13 on 00C02												
	Demo Conc SOG with Rebar	2220.083	22.28 cy	39.25 /mh	1,749	/cy			/cy			1,749	2,536
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	10	60	60
	Cut N Break Saw	1900.138	0.10 Mnth	/Mnth		1,000.00 /Mnth	100		500.00 /Mnth	50	15	165	165
	(3rd Party) Dump Truck, 10 wheel	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	44.56 tn	/tn		45.00 /tn	2,005		/tn			2,005	2,005
	Demo Conc Valley Pan per Note 13 on 00C02		22.28 cy		1,749		2,105	1,215		1,920	575	7,564	8,351
	0204- Demo Conc Sidewalk Note 5-00C03												
	Demo Conc Sidewalk (63 SF)	2220.083	0.78 cy	39.25 /mh	980	/cy			/cy			980	1,421
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	90 lb Jack Hammer	1900.138	0.05 Mnth	/Mnth		/Mnth			500.00 /Mnth	25	5	30	30
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		1,000.00 /Mnth	50		500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	1.56 tn	/tn		45.00 /tn	70		/tn			70	70
	Demo Conc Sidewalk Note 5-00C03		0.78 cy		980		120	405		960	288	2,752	3,193
	0206- Demo Buried Pipe - 2" NPW Note 1 - 00C01												
	Demo Buried Pipe 2" NPW - Copper	2230.100	257.00 lf	39.25 /mh	504	/lf			/lf			504	731
	Trench Excavtion 0- 4'	2333.010	257.00 lf	39.25 /mh	403	/lf			/lf			403	585
	Trench Backfill 0- 4'	2333.020	257.00 lf	39.25 /mh	504	/lf			/lf			504	731
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,380	525	1,905	1,905
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,080	450	1,530	1,530
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	500	120	620	620
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			400.00 /Mnth	40	10	50	50
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	325	50	375	375
	Pot Hole Existing	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Cross Existing	2333.010	2.00 ea	39.25 /mh	157	100.00 /ea	200		/ea			357	428
	Support Existing	2333.010	2.00 ea	39.25 /mh	79	50.00 /ea	100		/ea			179	214
	Demo Buried Pipe - 2" NPW Note 1 - 00C01		257.00 lf		1,962		300			3,325	1,155	6,742	7,624
	0206- Demo Buried Pipe Note 5 - 00C01												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0206- Demo Buried Pipe Note 5 - 00C01												
	Demo Ductile Iron Pipe ?" PS - DIP	2230.100	10.00 lf	39.25 /mh	785	/lf			/lf			785	1,138
	Trench Excavtion 8-10'	2333.010	10.00 lf	39.25 /mh	393	/lf			/lf			393	569
	Trench Backfill 8-10'	2333.020	10.00 lf	39.25 /mh	393	/lf			/lf			393	569
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,080	450	1,530	1,530
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Plug Existing	2333.010	1.00 ea	39.25 /mh	39	200.00 /ea	200		/ea			239	257
	Demo Buried Pipe Note 5 - 00C01		10.00 lf		1,845		200			2,433	890	5,367	6,197
	0206- Demo Buried Pipe 42" PE per Note 8 on 00C01												
	Demo Ductile Iron Pipe 42" PE - DIP	2230.100	10.00 lf	39.25 /mh	393	/lf			/lf			393	569
	Trench Excavtion 4- 6'	2333.010	10.00 lf	39.25 /mh	942	/lf			/lf			942	1,366
	Trench Backfill 4- 6'	2333.020	10.00 lf	39.25 /mh	393	/lf			/lf			393	569
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo Saw	1662.100	8.00 mnhr	/mnhr		1.25 /mh	10		12.50 /mnhr	100	20	130	130
	Demo Buried Pipe 42" PE per Note 8 on 00C01		10.00 lf		2,198		10			1,713	585	4,506	5,495
	0206- Demo Buried Pipe 3/4" CST - PVC Note 9 - 00C01												
	Demo Buried Pipe 3/4" - PVC	2230.100	45.00 lf	39.25 /mh	353	/lf			/lf			353	512
	Trench Excavtion 0- 4'	2333.010	45.00 lf	39.25 /mh	177	/lf			/lf			177	256
	Trench Backfill 0- 4'	2333.020	45.00 lf	39.25 /mh	265	/lf			/lf			265	384
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Demo Buried Pipe 3/4" CST - PVC Note 9 - 00C01		45.00 lf		1,187		100			1,613	565	3,465	3,999
	0206- Demo Buried Pipe 14" SSFM & Plug per Note 14 & 15 on 00C01												
	Demo Ductile Iron Pipe (Enter Dia)	2230.100	10.00 lf	39.25 /mh	2,355	/lf			/lf			2,355	3,415
	Trench Excavtion 4- 6'	2333.010	10.00 lf	39.25 /mh	1,570	/lf			/lf			1,570	2,277
	Trench Backfill 4- 6'	2333.020	10.00 lf	39.25 /mh	1,570	/lf			/lf			1,570	2,277
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Tie to Existing	2333.010	1.00 ea	39.25 /mh	79	500.00 /ea	500		/ea			579	614
	Plug Existing	2333.010	1.00 ea	39.25 /mh	314	350.00 /ea	350		/ea			664	805
	Trench Box	1900.300	1.00 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	8,000	0	8,000	8,000
	Demo Buried Pipe 14" SSFM & Plug per Note 14 & 15 on 00C01		10.00 lf		6,202		850			14,263	2,075	23,389	26,180
	0206- Demo Buried Pipe 2" PW per Note 7 on 00C02												
	Demo Buried Copper Pipe 2" PW	2230.100	35.00 lf	39.25 /mh	137	/lf			/lf			137	199
	Trench Excavtion 0- 4'	2333.010	35.00 lf	39.25 /mh	687	/lf			/lf			687	996

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0206- Demo Buried Pipe 2" PW per Note 7 on 00C02												
	Trench Backfill 0- 4'	2333.020	35.00 If	39.25 /mh	550	/lf			/lf			550	797
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Cross Existing	2333.010	1.00 ea	39.25 /mh	79	100.00 /ea	100		/ea			179	214
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Demo Buried Pipe 2" PW per Note 7 on 00C02		35.00 If		1,766		200			1,613	565	4,144	4,939
	0206- Demo Buried Pipe 1" CA per note 11 on 00C02												
	Demo Buried Copper Pipe (Enter Dia)	2230.100	74.00 If	39.25 /mh	145	/lf			/lf			145	211
	Trench Excavtion 0- 4'	2333.010	74.00 If	39.25 /mh	1,452	/lf			/lf			1,452	2,106
	Trench Backfill 0- 4'	2333.020	74.00 If	39.25 /mh	1,162	/lf			/lf			1,162	1,685
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,080	450	1,530	1,530
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Reroute Lab CA	15402.010	1.00 ls	/ls		/ls			/ls		2,500	2,500	2,500
	Demo Buried Pipe 1" CA per note 11 on 00C02		74.00 If		3,073					2,433	3,390	8,896	10,279
	0206- Demo Buried Pipe 42" PE per Note 16 on 00C01												
	Demo Ductile Iron Pipe 42" PE - DIP	2230.100	10.00 If	39.25 /mh	785	/lf			/lf			785	1,138
	Trench Excavtion 4- 6'	2333.010	10.00 If	39.25 /mh	785	/lf			/lf			785	1,138
	Trench Backfill 4- 6'	2333.020	10.00 If	39.25 /mh	785	/lf			/lf			785	1,138
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo Saw	1662.100	8.00 mnhr	/mnhr		1.25 /mh	10		12.50 /mnhr	100	20	130	130
	DI MJ Std Wgt Cap 42	2511.210	1.00 ea	39.25 /mh	1,099	15,300.00 /ea	15,300		/ea			16,399	16,894
	Remove and replace asphalt, curb patch etc.	2740.840	1.00 ls	/ls		/ls			/ls		5,000	5,000	5,000
	Trench Box 10 deep	1900.300	1.00 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	6,000	0	6,000	6,000
	Demo Buried Pipe 42" PE per Note 16 on 00C01		10.00 If		3,925		15,310			12,363	7,095	38,693	40,459
	0206- Demo Buried Pipe 16" PE per Note 16 on 00C01												
	Demo Ductile Iron Pipe 42" PE - DIP	2230.100	10.00 If	39.25 /mh	393	/lf			/lf			393	569
	Trench Excavtion 4- 6'	2333.010	10.00 If	39.25 /mh	942	/lf			/lf			942	1,366
	Trench Backfill 4- 6'	2333.020	10.00 If	39.25 /mh	393	/lf			/lf			393	569
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cut Existing	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo Saw	1662.100	8.00 mnhr	/mnhr		1.25 /mh	10		12.50 /mnhr	100	20	130	130
	DI MJ Compact Cap 16	2511.310	1.00 ea	39.25 /mh	69	3,000.00 /ea	3,000		/ea			3,069	3,100
	Demo Buried Pipe 16" PE per Note 16 on 00C01		10.00 If		2,267		3,010			1,713	585	7,574	8,594
	0206- Demo Buried Pipe - 2" NPW Note 1 - 00C02												
	Demo Buried Pipe 2" NPW - Copper	2230.100	310.00 If	39.25 /mh	243	/lf			/lf			243	353
	Trench Excavtion 0- 4'	2333.010	310.00 If	39.25 /mh	243	/lf			/lf			243	353

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0206- Demo Buried Pipe - 2" NPW Note 1 - 00C02												
	Trench Backfill 0- 4'	2333.020	310.00 If	39.25 /mh	243	/lf			/lf			243	353
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	250	60	310	310
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	163	25	188	188
	Pot Hole Existing	2333.010	3.00 ea	39.25 /mh	471	/ea			/ea			471	683
	Cross Existing	2333.010	3.00 ea	39.25 /mh	236	100.00 /ea	300		/ea			536	641
	Support Existing	2333.010	3.00 ea	39.25 /mh	118	50.00 /ea	150		/ea			268	321
	Demo Buried Pipe - 2" NPW Note 1 - 00C02		310.00 If		1,554		450			1,253	415	3,672	4,371
	0206- Demo Buried Pipe 14" SSFM & Plug and 8" PW per Note 3 on 00C02												
	Demo Ductile Iron Pipe - 14"	2230.100	160.00 If	39.25 /mh	314	/lf			/lf			314	455
	Trench Excavtion 4- 6'	2333.010	160.00 If	39.25 /mh	440	/lf			/lf			440	637
	Trench Backfill 4- 6'	2333.020	160.00 If	39.25 /mh	440	/lf			/lf			440	637
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	500	120	620	620
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			400.00 /Mnth	40	10	50	50
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	325	50	375	375
	Pot Hole Existing	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	157	500.00 /ea	1,000		/ea			1,157	1,228
	Plug Existing	2333.010	2.00 ea	39.25 /mh	628	350.00 /ea	700		/ea			1,328	1,611
	Demo Buried Pipe 14" SSFM & Plug and 8" PW per Note 3 on 00C02		160.00 If		2,449		1,700			2,505	830	7,484	8,586
	0212- Remove Landscape Rock Note 7 - 00C01												
	Strip Landscape Rock to Stockpile	2314.200	15.00 cy	39.25 /mh	1,178	/cy			/cy			1,178	1,707
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	Demo Filter Fabric	2220.735	1.00 ea	39.25 /mh	79	/ea			/ch			79	114
	Remove Landscape Rock Note 7 - 00C01				1,256					360	150	1,766	2,331
	DEMO Demolition				98,344		84,369	82,080		94,093	32,880	391,766	436,021
	ELE Electrical												
	0204- Demo Asphalt for New Duct Bank - 01E02												
	Demo Asphalt	2220.083	7.78 cy	39.25 /mh	176	/cy			/cy			176	255
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		/Mnth	1,000.00	50	500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	1.89 Hrs	/Hrs		/Hrs		255	/Hrs			255	255
	Dump Fees by ton	1714.100	16.34 tn	/tn		45.00 /tn	735		/tn			735	735
	Demo Asphalt for New Duct Bank - 01E02		7.78 cy		176		785	255		935	283	2,433	2,512
	0204- Demo Conc Curbs at New Duck Bank 01E02												
	Demo Conc Curbs	2220.083	5.27 cy	39.25 /mh	1,862	/cy			/cy			1,862	2,699
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	550	125	675	675
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	90 lb Jack Hammer	1900.138	0.05 Mnth	/Mnth		/Mnth			500.00 /Mnth	25	5	30	30
	Cut N Break Saw	1900.138	0.05 Mnth	/Mnth		/Mnth	1,000.00	50	500.00 /Mnth	25	8	83	83
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	10.50 tn	/tn		45.00 /tn	473		/tn			473	473
	Demo Conc Curbs at New Duck Bank 01E02		0.93 cy		1,862		523	405		960	288	4,037	4,874
	ELE Electrical				2,037		1,308	660		1,895	570	6,470	7,387
	00 - SITE Site				100,381		85,677	82,740		95,988	33,450	398,236	443,407
	00 - WS Weir Structure												
	DEMO Demolition												
	02-2b Demo Pipe - DI - Weir Structure - 00D02												
	Demo DI Pipe	2220.605	20.00 If	39.25 /mh	628	/lf			/lf			628	911
	Demo Pipe Valves 10" - Telescoping	2220.840	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo Pipe Valves 4" - Telescoping	2220.840	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Support Sluice Gate Operator	2220.840	2.00 ea	39.25 /mh	628	500.00 /ea	1,000		/ea			1,628	1,911
	Demo Pipe Collar	2220.840	1.00 ea	39.25 /mh	157	/ea			/ea			157	228

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02-2b Demo Pipe - DI - Weir Structure - 00D02												
	Cap Air Pipe	2220.605	1.00 ea	39.25 /mh	79	150.00 /ea	150		/ea			229	264
	Demo DI Pipe 8" PI	2220.605	11.00 lf	39.25 /mh	108	/lf			/lf			108	157
	Demo DI Pipe 8" PI - Drain & Plug	2220.605	1.00 ea	39.25 /mh	314	1,000.00 /ea	1,000		/ea			1,314	1,455
	Demo DI Pipe 8" PI - Fill Hole in Wall SD871	2220.605	1.00 ea	39.25 /mh	157	350.00 /ea	350		/ea			507	578
	Core Drilled Hole - 40" x 12" Thick	15122.100	1.00 ea	39.25 /mh	628	1.00 /ea	1	4,000	/ea			4,629	4,912
	Demo DI Pipe 4" SCUM Pipe	2220.605	1.00 ea	39.25 /mh	1	/ea			/ea			1	1
	Demo DI Pipe 4" SCUM - Fill Hole in Wall SD871	2220.605	1.00 ea	39.25 /mh	157	175.00 /ea	175		/ea			332	403
	Grind/Patch/Cut Back Anchors & Coat w/Epoxy	3350.130	24.00 ea	39.25 /mh	330	5.00 /ea	120		/ea			450	598
	Grind/Patch Walls	3350.130	1.00 ls	39.25 /mh	628	1,500.00 /ls	1,500		/ls			2,128	2,411
	Instrument - Level - Salvage	17300.000	1.00 ls	39.25 /mh	314	500.00 /ls	500		/ls			814	955
	Demo Electrical - Junction Boxes & Conduit	2220.140	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Dumpster Pickups	2220.980	1.00 ea	/ea		650.00 /ea	650		/ea			650	650
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	8,800.00 /mnth	2,200	450.00 /mnth	113		10,400.00 /mnth	2,600	700	5,613	6,603
	Demo Pipe - DI - Weir Structure - 00D02		20.00 lf		7,898		5,559	4,000		2,600	700	20,756	24,310
	0204- Demo Conc Suspended Slabs - 00D02 - Weir Strucure												
	Demo Conc SOG with Rebar	2220.083	5.75 cy	39.25 /mh	903	/cy			/cy			903	1,309
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	12.08 tn	/tn		45.00 /tn	543		/tn			543	543
	Saw Cut Concrete Suspended Slab 12"	2220.083	50.00 lf	39.25 /mh	98	/lf		1,800	/lf			1,898	1,942
	Core Drill Concrete 4"x12" for Rigging	2220.085	18.00 ea	39.25 /mh	2,120	/ea		1,260	/ea			3,380	4,333
	Specialty Rigging -	1900.300	1.00 ls	/ls		1,000.00 /ls	1,000		1,000.00 /ls	1,000		2,000	2,000
	Shore Suspended Slab 0-15'	3100.124	156.00 sf	39.25 /mh	1,531	3.00 /sf	491		/sf			2,022	2,711
	Demo - Misc Metals - Access Hatch	2220.490	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Remove and Store Exisitng Handrail	5001.115	60.00 lf	39.25 /mh	236	5.00 /lf	300		/lf			536	641
	Install Temp Handrail	5001.115	60.00 lf	39.25 /mh	471	5.00 /lf	300		/lf			771	983
	Reinstall Aluminum Handrail	5001.115	60.00 lf	39.25 /mh	353	2.50 /lf	150		/lf			503	662
	Demo Conc Suspended Slabs - 00D02 - Weir Strucure		5.75 cy		5,868		2,785	3,465		2,820	550	15,488	18,128
	0204- Demo Conc Walls - Weir Wall 00D02 - Weir Structure												
	Demo Conc Walls Light Rebar	2220.083	5.50 cy	39.25 /mh	1,295	/cy			/cy			1,295	1,878
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	10	60	60
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	(3rd Party) Dump Truck, 10 wheel	1900.210	3.00 Hrs	/Hrs		/Hrs		405	/Hrs			405	405
	Dump Fees by ton	1714.100	11.55 tn	/tn		45.00 /tn	520		/tn			520	520
	Saw Cut Concrete Wall 12" SUB	2220.083	49.00 lf	39.25 /mh	96	/lf		1,764	/lf			1,860	1,903
	Core Drill Concrete for Rigging	2220.085	12.00 ea	39.25 /mh	471	/ea		840	/ea			1,311	1,523
	Specialty Rigging -	1900.300	1.00 ls	/ls		1,000.00 /ls	1,000		1,000.00 /ls	1,000		2,000	2,000
	Demo Conc Walls - Weir Wall 00D02 - Weir Structure		5.50 cy		1,862		1,520	3,009		2,510	410	9,311	10,149
	DEMO Demolition				15,628		9,863	10,474		7,930	1,660	45,555	52,588
	00 - WS Weir Structure				15,628		9,863	10,474		7,930	1,660	45,555	52,588
	05 - GEN 1 Generator 1												
	DEMO Demolition												
	020- Demo Generator 1 - 05D01												
	Note 1 - Demo Fuel Monitoring System	2220.730	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Note 2 - Remove Generator 1	2220.730	1.00 ls	39.25 /mh	2,512	/ls			/ls			2,512	3,642
	Note 3 - Remove & Replace Louver	2220.730	1.00 ls	39.25 /mh	1,256	/ls			/ch			1,256	1,821
	Note 4 - Remove Cables & Conduit	2220.730	1.00 ls	39.25 /mh	628	/ls			/ch			628	911
	Note 5 - Remove Generator Pad	2220.730	2.00 cy	39.25 /mh	3,768	/cy			/ch			3,768	5,464
	Note 5 - Patch Floor per SD820	2220.730	108.00 sf	39.25 /mh	1,060	20.00 /sf	2,160		/ch			3,220	3,697
	Note 6 - Remove Fuel Pipes & Tank	2220.735	1.00 ls	39.25 /mh	628	0.00 /ls	0	1,500	/ls			2,128	2,411
	Note 7 - Remove Exhaust Pipes	2220.735	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Note 7 - Repair Roof at Pipes	2220.735	1.00 ls	39.25 /mh	157	/ls		5,000	/ch			5,157	5,228
	Note 8 - Remove Fuel Vent Line	2220.735	1.00 ls	39.25 /mh	314	/ls			/ch			314	455
	Note 8 - Patch CMU	2220.735	1.00 ls	39.25 /mh	79	/ls		2,500	/ch			2,579	2,614
	Demo Conc Containemnt Wall	2220.083	0.80 cy	39.25 /mh	502	/cy			/cy			502	728
	Drain Fuel from Generator	2220.280	1.00 ls	/hrs		/ls		1,000	/ls			1,000	1,000
	Temporary Protection - Room	1116.200	1.00 ls	/ls		750.00 /ls	750		/ls			750	750
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.50 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	2,250	750	3,000	3,000
	Scaffolding	1900.300	1.00 ls	/ls		/ls			1,000.00 /ls	1,000	100	1,100	1,100
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		0.00 /ls	0		1,500	1,500
	90 lb Jack Hammer	1900.138	0.50 Mnth	/Mnth		/Mnth			500.00 /Mnth	250	50	300	300
	Jack Hammer Concrete	2220.083	1.00 ls	39.25 /mh	39	/ls			/ls			39	57
	Bush Hammer Slab	2220.205	108.00 sf	39.25 /mh	170	/sf			/ch			170	246
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.50 Mnth	/Mnth		/Mnth			1,400.00 /Mnth	700	353	1,053	1,053

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	020- Demo Generator 1 - 05D01												
	Water Cure	3390.170	108.00 sf	39.25 /mh	42	1.00 /sf	108		/sf			150	169
	Trucking Demo - Generator	2220.980	4.00 hr	39.25 /hr	157	/hr		1,000	/hr			1,157	1,228
	Dump Fees - Generator	2220.980	1.00 ls	/ls		58.00 /ls	58		/ls			58	58
	Trucking Demo - Concrete	2220.980	3.00 hr	39.25 /hr	118	/hr		375	/hr			493	546
	Dump Fees - Concrete	2220.980	5.60 tn	/tn		45.00 /tn	252		/tn			252	252
	Dumpster Pickups	2220.980	1.00 ea	/ea		650.00 /ea	650		/ea			650	650
	Backer Rod 3/4"	7920.300	50.00 lf	39.25 /mh	39	0.25 /lf	14		/lf			53	71
	Expansion Joint Sealant	3150.720	50.00 lf	39.25 /mh	196	5.00 /lf	263		/lf			459	547
	Demo Generator 1 - 05D01		1.00 ls		12,136		5,754	11,375		4,200	1,253	34,718	40,179
	DEMO Demolition				12,136		5,754	11,375		4,200	1,253	34,718	40,179
	05 - GEN 1 Generator 1				12,136		5,754	11,375		4,200	1,253	34,718	40,179
	16 - EQEQUIP EQ Equipment Room												
	DEMO Demolition												
	02-2c Demo EQ Equipment Room per 16D01												
	Note 1 - CMU Infill Duct Wall Openings	4000.220	2.00 ea	39.25 /mh	1,256	500.00 /ea	1,000	2,500	/ea			4,756	5,321
	Note 2 - Demo PVC Foul Air Piping	2220.615	1.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Note 2 - Protect Remaining Duct	2220.615	1.00 ea	39.25 /mh	1,256	350.00 /ea	350	2,500	/ea			4,106	4,671
	Note 3 - Demo Duct 2' Past Edge of Slab	2220.615	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Note 3 - Cap end of Duct	2220.615	1.00 ea	39.25 /mh	79	1,250.00 /ea	1,250		/ea			1,329	1,364
	Note 4 - Demo CST Lines	2220.615	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Remove and Salvage Ceiling Lights	2220.615	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo Odor Control Fans	2220.615	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Demo Acoustic Wall Panels	2220.615	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Demo Metal Building	2220.615	1.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Dumpster Pickups	2220.980	3.00 ea	/ea		650.00 /ea	1,950		/ea			1,950	1,950
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	Note 5 - Remove EIFS on South Wall	2220.680	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Note 6 - Protect in Place Handhole & Ductbank	2220.680	1.00 ea	39.25 /mh	314	250.00 /ea	250		/ea			564	705
	Demo EQ Equipment Room per 16D01		20.00 lf		6,594		4,800	5,000		1,820	550	18,764	21,731
	0204- Demo Conc Slabs - 16D01												
	Demo Conc SOG with Rebar	2220.083	17.04 cy	39.25 /mh	4,012	/cy			/cy			4,012	5,818
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,078	245	1,323	1,323
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	706	294	1,000	1,000
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	49	10	59	59
	Cut N Break Saw	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	49	15	162	162
	(3rd Party) Dump Truck, 10 wheel	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	35.78 tn	/tn		45.00 /tn	1,610		/tn			1,610	1,610
	Torch Set and Ocy/Acet.	1900.300	0.10 Mnth	/Mnth		1,500.00 /Mnth	150		0.00 /Mnth	0		150	150
	Demo Conc Slabs - 16D01		17.04 cy		4,012		1,858	1,215		1,882	564	9,530	11,336
	0204- Demo Conc Footings - 16D01												
	Demo Conc SOG with Rebar	2220.083	19.11 cy	39.25 /mh	1,500	/cy			/cy			1,500	2,175
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	10	60	60
	Cut N Break Saw	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	15	165	165
	(3rd Party) Dump Truck, 10 wheel	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	40.13 tn	/tn		45.00 /tn	1,806		/tn			1,806	1,806
	Torch Set and Ocy/Acet.	1900.300	0.10 Mnth	/Mnth		1,500.00 /Mnth	150		0.00 /Mnth	0		150	150
	Demo Conc Footings - 16D01		19.11 cy		1,500		2,056	1,215		1,920	575	7,266	7,941
	0204- Demo Conc Encasement												
	Demo Conc SOG no Reinf	2220.083	15.41 cy	39.25 /mh	907	/cy			/cy			907	1,315
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	1,100	250	1,350	1,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	720	300	1,020	1,020
	90 lb Jack Hammer	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	10	60	60
	Cut N Break Saw	1900.138	0.10 Mnth	/Mnth		/Mnth			500.00 /Mnth	50	15	165	165
	(3rd Party) Dump Truck, 10 wheel	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	32.36 tn	/tn		45.00 /tn	1,456		/tn			1,456	1,456
	24" FRP Cap	2336.330	1.00 ea	39.25 /mh	942	4,500.00 /ea	4,500		/ea			5,442	5,866

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Demo Conc Encasement		15.41 cy		1,849		6,056	1,215		1,920	575	11,615	12,447
	DEMO Demolition				13,956		14,770	8,645		7,542	2,264	47,176	53,456
	16 - EQEQUIP EQ Equipment Room				13,956		14,770	8,645		7,542	2,264	47,176	53,456
22 - EPS	PS East Primary Sludge Pump Station												
	DEMO Demolition												
	02-2b Demo at East Primary Sludge Pump Station - 22D01												
	Remove Meter & Reducers	2220.605	1.00 ea	39.25 /mh	118	/ea			/ea			118	171
	Remove 6" Elbow	2220.605	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Preserve Pipe Support for Reuse	2220.605	1.00 ea	39.25 /mh	79	100.00 /ea	100		/ea			179	214
	Clean, Plug & Abandon Sludge Pipe at Wall	2220.605	1.00 ea	39.25 /mh	942	500.00 /ea	500		/ea			1,442	1,866
	Note 1 - Remove Spool Piece	2220.605	1.00 ea	39.25 /mh	236	/ea			/ea			236	341
	Note 2 - Plug Valve Preserved for Reuse	2220.605	1.00 ea	39.25 /mh	236	/ea			/ea			236	341
	Note 3 - Remove Valve, Tee & Piping	2220.605	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Demo at East Primary Sludge Pump Station - 22D01		2.00 lf		2,002		600					2,602	3,503
	DEMO Demolition				2,002		600					2,602	3,503
	22 - EPS PS East Primary Sludge Pump Station				2,002		600					2,602	3,503
24 - EQPS	EQ Pump Station												
	DEMO Demolition												
	020- Demo - EQ Pump Station - 24D01												
	Note 1 - Demo CST Lines	2220.730	1.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	Note 2 - Salvage Heat Trace Controller	2220.730	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Note 3 - Demo Receptacle & associated Conduit	2220.730	1.00 ea	39.25 /mh	314	/ea			/ch			314	455
	Note 4 - Remove Handrail & Supports	2220.730	93.00 lf	39.25 /mh	730	/lf			/ch			730	1,059
	Note 5 - Demo Concrete Wall to Elev 5225	2220.730	9.38 cy	39.25 /mh	2,209	/cy			/ch			2,209	3,203
	Site Excavation dirt in bottom and chip concrete for truck	2220.730	100.00 cy	39.25 /mh	4,906	/cy			/ch			4,906	7,114
	Demo Concrete - Wall at Ext Stairs	2220.735	11.86 cy	39.25 /mh	2,793	/cy			/cy			2,793	4,050
	Demo Concrete - Slab at Ext Stairs	2220.735	5.69 cy	39.25 /mh	1,340	/cy			/cy			1,340	1,943
	Demo Handrail at Ext Stairs	2220.735	43.00 lf	39.25 /mh	338	/lf			/ch			338	489
	Demo Metal Ext Metal Stairs	2220.735	1.00 ea	39.25 /mh	942	/ea			/ch			942	1,366
	Cut N Break Saw	1900.138	2.00 Mnth	/Mnth		1,000.00 /Mn th	2,000		500.00 /Mnth	1,000	300	3,300	3,300
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	2.00 mnth	8,000.00 /mnth	16,000	450.00 /mn th	900		10,400.00 /mnth	20,800	5,600	43,300	50,500
	Specialty Rigging -	1900.300	1.00 ls	/ls		2,500.00 /ls	2,500		1,000.00 /ls	1,000		3,500	3,500
	(3rd Party) Dump Truck, 10 wheel	1900.210	81.00 Hrs	/Hrs		/Hrs		10,935	/Hrs			10,935	10,935
	Dump Fees by ton	1714.100	212.00 tn	/tn		45.00 /tn	9,540		/tn			9,540	9,540
	Saw Cut Concrete Wall 12" SUB	2220.083	398.00 lf	39.25 /mh	3,905	/lf		14,328	/lf			18,233	19,991
	Saw Cut Concrete Slab	2220.083	56.00 lf	39.25 /mh	440	/lf		2,016	0.00 /lf	0		2,456	2,653
	Core Drill Concrete 4"x12" thick	2220.085	92.00 ea	39.25 /mh	3,611	/ea		6,440	/ea			10,051	11,676
	Demo Concrete 6"x6"x12" thick pieces	2220.083	25.00 ea	39.25 /mh	7,850	/ea			/ea			7,850	11,383
	Demo - Grating	2220.490	180.00 sf	39.25 /mh	707	/sf			/sf			707	1,024
	Grind/Patch Corners at Concrete	3350.130	1.00 ls	39.25 /mh	6,280	500.00 /ls	500		/ls			6,780	9,606
	Grind/Patch/Grout rebar back 1"	3350.130	648.00 ea	39.25 /mh	8,902	5.00 /ea	3,240		/ea			12,142	16,148
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	7,600	4,000	11,600	11,600
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mn th			5,510.00 /Mnth	5,510	2,000	7,510	7,510
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	2.00 Mnth	/Mnth		/Mn th			1,500.00 /Mnth	3,000	200	3,200	3,200
	Demo - EQ Pump Station - 24D01		1.00 ls		62,679		18,680	33,719		46,110	15,100	176,288	204,494
	0234-1 Dental Excavation - Perimeter to Allow for Demo												
	Excavation - Dental	2317.105	500.00 cy	39.25 /mh	2,355	/cy			/cy			2,355	3,415
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.14 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	1,306	497	1,803	1,803
	John Deere 624 Loader (172 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	1,022	426	1,448	1,448
	John Deere 624 Loader (172 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	1,022	426	1,448	1,448
	John Deere 624 Loader (172 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	1,022	426	1,448	1,448
	Remove Dirt Inside Existing	2300.600	250.00 cy	39.25 /mh	2,453	/cy			/cy			2,453	3,557
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mn th			5,510.00 /Mnth	827	300	1,127	1,127
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.15 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	570	300	870	870
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.15 mnth	4,600.00 /mnth	690	450.00 /mn th	68		10,400.00 /mnth	1,560	420	2,738	3,048
	Concrete Crane Buckets	3995.100	0.15 Mnth	/Mnth		/Mn th			150.00 /Mnth	23		23	23
	(3rd Party) Dump Truck, 10 wheel	1900.210	45.00 Hrs	/Hrs		/Hrs		6,075	/Hrs			6,075	6,075
	Dental Excavation - Perimeter to Allow for Demo		500.00 cy		5,498		68	6,075		7,353	2,795	21,788	24,262
	0235-1 Dental Backfill Perimter to allow for Demo												
	Backfill - Dental	2319.302	500.00 cy	39.25 /mh	2,453	/cy			/cy			2,453	3,557

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0235-1 Dental Backfill Perimter to allow for Demo												
	John Deere 624 Loader (172 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,022	426	1,448	1,448
	Water Truck, 4,000 Gallon (L)	1900.210	0.14 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	710	170	880	880
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	462	71	533	533
	Mikasa Jumping Jack Compactor (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			400.00 /Mnth	57	14	71	71
	Dental Backfill Perimter to allow for Demo		500.00 cy		2,453					2,251	682	5,385	6,489
	DEMO Demolition				70,631		18,748	39,794		55,713	18,577	203,462	235,246
	24 - EQPS EQ Pump Station				70,631		18,748	39,794		55,713	18,577	203,462	235,246
	26 - Flow EQ Flow Equalization Pump Station												
	DEMO Demolition												
	020- Misc Site Demolition - Flow EQ Building												
	Demo Electrical	2220.730	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Demo HVAC	2220.730	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Demo Process Equipment	2220.730	1.00 ls	39.25 /mh	3,140	/ls			/ch			3,140	4,553
	Demo Monorail & Hoist System	2220.730	1.00 ls	39.25 /mh	314	/ls			/ch			314	455
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.50 mnth	4,600.00 /mnth	2,300	/mnth	225		10,400.00 /mnth	5,200	1,400	9,125	10,160
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,600	1,750	6,350	6,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.50 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	2,250	750	3,000	3,000
	Boom Lift (L)	1900.300	0.50 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	2,750	625	3,375	3,375
	Misc Site Demolition - Flow EQ Building				7,010		225			18,400	6,025	31,660	34,815
	0203- DEMO CONCRETE - HEAVY												
	Demo Concrete	2220.083	230.00 cy	39.25 /mh	36,110	/cy			/cy			36,110	52,360
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	2.00 Mnth	/Mnth		/Mnth			11,000.00 /Mnth	22,000	5,000	27,000	27,000
	90 lb Jack Hammer	1900.138	2.00 Mnth	/Mnth		/Mnth			500.00 /Mnth	1,000	200	1,200	1,200
	Air Compressor 185 cfm (66 HP) (L)	1900.010	2.00 Mnth	/Mnth		/Mnth			1,400.00 /Mnth	2,800	1,410	4,210	4,210
	Cut N Break Saw (Add Blade Pricing)	1900.138	2.00 Mnth	/Mnth		/Mnth	2,000		500.00 /Mnth	1,000	300	3,300	3,300
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		/ls	1,500		0.00 /ls	0		1,500	1,500
	John Deere 624 Loader (172 HP) (M)	1900.132	2.00 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	14,400	6,000	20,400	20,400
	(3rd Party) Dump Truck, 10 wheel	1900.210	138.00 Hrs	/Hrs		/Hrs		18,630	/Hrs			18,630	18,630
	Dump Fees	2220.980	460.00 tn	/tn		/tn	20,700		/tn			20,700	20,700
	DEMO CONCRETE - HEAVY				36,110		24,200	18,630		41,200	12,910	133,050	149,300
	0204-1 Demo Above Ground Structure												
	Demo Above Ground Structure	2220.480	480.00 sf	39.25 /mh	1,884	/sf			/ch			1,884	2,732
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.92 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	8,492	3,231	11,722	11,722
	John Deere 624 Loader (172 HP) (M)	1900.132	0.92 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	6,646	2,769	9,415	9,415
	John Deere 644 Loader (232 HP) (M)	1900.132	0.92 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	7,384	3,415	10,799	10,799
	90 lb Jack Hammer	1900.138	0.92 Mnth	/Mnth		/Mnth			500.00 /Mnth	462	92	554	554
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.92 Mnth	/Mnth		/Mnth	923		500.00 /Mnth	462	138	1,523	1,523
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.92 mnth	8,800.00 /mnth	8,122	/mnth	415		10,400.00 /mnth	9,599	2,584	20,721	24,376
	Equip Rental - Demo pincher	1900.300	0.92 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	4,615	1,385	6,000	6,000
	(3rd Party) Dump Truck, 10 wheel	1900.210	243.00 Hrs	/Hrs		/Hrs		32,805	/Hrs			32,805	32,805
	Dump Fees by ton (to dump)	1714.100	608.00 tn	/tn		/tn	27,360		/tn			27,360	27,360
	Demo Above Ground Structure		480.00 sf		10,006		28,698	32,805		37,658	13,614	122,782	127,285
	0234-3 Dental Excavation (Man Hour)												
	Excavation - Dental (MNHR)	2317.105	960.00 hr	39.25 /mh	37,680	/hr			/hr			37,680	54,636
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,678	3,682	13,360	13,360
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	1.05 Mnth	/Mnth		/Mnth			5,510.00 /Mnth	5,797	2,104	7,901	7,901
	John Deere 624 Loader (172 HP) (M)	1900.132	1.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	7,574	3,156	10,730	10,730
	Dental Excavation (Man Hour)		3,704.00 cy		37,680					23,049	8,942	69,671	86,627
	0235- Backfill EQ Building												
	Backfill - Mass	2319.302	4,500.00 cy	39.25 /mh	21,195	/cy			/cy			21,195	30,733

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0235- Backfill EQ Building												
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.75 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	6,900	2,625	9,525	9,525
	John Deere 644 Loader (232 HP) (M)	1900.132	0.75 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	6,000	2,775	8,775	8,775
	Water Truck, 4,000 Gallon (L)	1900.210	0.75 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	3,750	900	4,650	4,650
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	12,190	3,300	15,490	15,490
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.75 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	2,438	375	2,813	2,813
	Backfill EQ Building		4,500.00 cy		21,195					31,278	9,975	62,448	71,985
	0238-3 Dewater Well & Pump												
	Subcont Well Drilling 18"	2240.300	100.00 lf	/lf		/lf		25,000	/lf			25,000	25,000
	Well Casing 12"	2240.300	66.67 lf	/lf		18.00 /lf	1,260		/lf			1,260	1,260
	Well Screen 12"	2240.300	33.33 lf	/lf		50.00 /lf	1,750		/lf			1,750	1,750
	Screen Sand Pack	2305.050	1.21 cy	/cy		75.00 /ton	170		/cy			170	170
	Casing Gravel Pack	2305.050	2.42 cy	/cy		31.00 /ton	141		/cy			141	141
	1/4" Pump Cable & Clamps	2240.300	120.00 lf	/lf		1.00 /lf	120		/lf			120	120
	3" Pump & Hoses	2240.120	480.00 day	39.25 /mh	2,355	50.00 /day	24,000		/day			26,355	27,415
	PVC Sch 80 PIPE 3" PE	15211.203	140.00 lf	39.25 /mh	1,154	7.60 /lf	1,064		/lf			2,218	2,737
	PVC Sch 80 CPLG 3" T	15211.233	4.00 ea	39.25 /mh	33	25.20 /ea	101		/ea			134	149
	PVC Sch 80 90 EL 3" S	15211.207	4.00 ea	39.25 /mh	33	16.60 /ea	66		/ea			99	114
	PVC Sch 80 Straight CPLG 3" S	15211.204	7.00 ea	39.25 /mh	58	12.60 /ea	88		/ea			146	172
	PVC Valve Ball True Union V/ton 3" S	15211.310	4.00 ea	39.25 /mh	33	203.00 /ea	812		/ea			845	860
	PVC Sch 80 Special - *	15211.202	4.00 ea	39.25 /mh	47	/ea			/ea			47	68
	Connect to Equipment (from Sch 80 PVC pipe)	15211.202	4.00 ea	39.25 /mh	47	/ea			/ea			47	68
	PVC Valve Swing Check 3"	15211.350	4.00 ea	39.25 /mh	39	975.00 /ea	3,900		/ea			3,939	3,957
	HD PE Pipe 8 DR 17	2631.301	400.00 lf	39.25 /mh	1,884	10.30 /lf	4,326		/lf			6,210	7,058
	HD PE 90 bend 8 DR 17	2631.314	6.00 ea	39.25 /mh	212	291.70 /ea	1,750		/ea			1,962	2,058
	HD PE 45 bend 8 DR 17	2631.314	6.00 ea	39.25 /mh	188	190.10 /ea	1,141		/ea			1,329	1,414
	HD PE 22 bend 8 DR 17	2631.314	4.00 ea	39.25 /mh	157	180.50 /ea	722		/ea			879	950
	Dewatering Set Up	2240.050	1.00 ls	39.25 /mh	39	/ls			/ls			39	57
	Dewatering Maintenance	2240.050	12.00 wk	39.25 /mh	471	/wk			/wk			471	683
	Dewatering Permit	2240.050	1.00 ls	/ls		/ls			/ls		850	850	850
	Dewatering Discharge Testing	2240.050	9.00 ea	/ea		/ea		0	/ea		2,025	2,025	2,025
	Dewatering Power	2240.050	4.00 mnth	39.25 /mh	157	/mnth			/mnth		60,000	60,157	60,228
	Dewatering Independent Design	2240.050	1.00 ls	/ls		/ls		5,000	/ls			5,000	5,000
	Dewater Well & Pump		1.00 ea		6,908		41,412	30,000			62,875	141,194	144,303
	0242-1 Shoring Sheetpile at Flow EQ Demo												
	Drivability Study	2250.140	1.00 ls	/ls		/ls		5,000	/ls			5,000	5,000
	Precondition Property Survey	2250.140	1.00 ls	/ls		/ls		10,000	/ls			10,000	10,000
	Vibration Monitoring	2250.140	1.00 ls	/ls		/ls		10,000	/ls			10,000	10,000
	Sub - Sheetpiling	2250.020	1.00 ls	/ls		/ls		400,000	/ls			400,000	400,000
	Mob/Demob Pile Drive Equipment	2250.110	1.00 ls	/ls		/ls		10,000	/ls			10,000	10,000
	Protect Existing	2250.110	1.00 ls	39.25 /mh	3,140	5,000.00 /ls	5,000		/mh			8,140	9,553
	Plug Penetrations	2250.110	1.00 ls	39.25 /mh	1,570	25,000.00 /ls	25,000		/mh			26,570	27,277
	Large Forklift	1950.400	1.00 Mnth	/Mnth		/Mnth			4,700.00 /Mnth	4,700	1,000	5,700	5,700
	Shoring Sheetpile at Flow EQ Demo				4,710		30,000	435,000		4,700	1,000	475,410	477,530
	DEMO Demolition				123,619		124,535	516,435		156,285	115,341	1,036,215	1,091,844
	26 - Flow EQ Flow Equalization Pump Station				123,619		124,535	516,435		156,285	115,341	1,036,215	1,091,844
	33 - NA North Aeration												
	DEMO Demolition												
	02-2a Demo - North Aeration Complex - 33D01												
	Demo Equipment - Centrifugal Blowers	2220.140	3.00 ea	39.25 /mh	3,768	/ea			/ea			3,768	5,464
	Demo Discharge Pipe 10' 14" pipe w/support 33D01 Sect B	2220.140	3.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Demo Inlet Pipe upper level floor 25' 16" pipe 33D01 Sect B	2220.140	3.00 ea	39.25 /mh	3,768	/ea			/ea			3,768	5,464
	Demo Inlet Pipe lower level floor 20' 16" upper floor to header pipe Sect 33D01	2220.140	5.00 ea	39.25 /mh	6,280	/ea			/ea			6,280	9,106
	Demo Inlet Pipe 36" lower level Silencer East to Blower connections 65'	2220.140	1.00 ea	39.25 /mh	5,024	/ea			/ea			5,024	7,285
	Demo Inlet Silencer 36" Lower level (60" diameter Silencer)	2220.140	1.00 ea	39.25 /mh	2,826	/ea			/ea			2,826	4,098
	Demo Pipe Inlet Silencer West to Roll Filters 36" and 48" 15 lf 36" 35 lf 48"	2220.140	1.00 ea	39.25 /mh	5,024	/ea			/ea			5,024	7,285
	Demo Baffle plates in roll filter room 4' plates over pipes	2220.140	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Demo Roll Filters	2220.140	2.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Demo Louvers 6'x6'	2220.140	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Demo Masonry Wall in Roll filter room 30 lf x 16' high	2220.140	1.00 ls	39.25 /mh	6,280	/ls			/ls			6,280	9,106
	Demo HM Doors	2220.140	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Demo Blower Pads (3ea)	2220.083	6.00 cy	39.25 /mh	7,536	/cy		1,800	/cy			9,336	12,727
	Grind/Patch Blower Pads	3350.130	144.00 sf	39.25 /mh	5,652	4.00 /sf	576		/sf			6,228	8,771
	Temp Enclosures for dust mitigation	1572.100	1.00 ls	/ls		1,500.00 /ls	1,500		/ls			1,500	1,500
	Saw Cut Masonry 8" Block	2220.083	45.00 lf	39.25 /mh	353	/lf			/lf			353	512
	Grind/Patch masonry Walls	3350.130	45.00 sf	39.25 /mh	883	4.00 /sf	180		/sf			1,063	1,461
	Patch Back Louvers (concrete wall and 4" masonry veneer)	3350.130	2.00 ea	39.25 /mh		4,250.00 /ea	8,500		/ea			8,500	8,500
	Grind/Patch 48" pipes Plate at bottom drill epoxy with conc	3350.130	2.00 ea	39.25 /mh	2,512	1,500.00 /ea	3,000		/ea			5,512	6,642
	Grind/Patch 16" pipes Place plate at bottom drill epoxy and fill with conc	3350.130	5.00 ea	39.25 /mh	3,140	500.00 /ea	2,500		/ea			5,640	7,053

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02-2a Demo - North Aeration Complex - 33D01												
	Caulking Louvers interior and exterior	7920.300	96.00 lf	39.25 /mh	377	15.00 /tube	124		/lf			501	670
	Field Welding - Carbon Steel	5000.985	40.00 hrs	39.25 /mh	1,570	/hrs		8,600	/hrs			10,170	10,877
	Grind/Patch misc pipe supports	3350.130	48.00 ea	39.25 /mh	942	4.00 /ea	192		/ea			1,134	1,558
	Dumpster Pickups	2220.980	12.00 ea	/ea		650.00 /ea	7,800		/ea			7,800	7,800
	(3rd Party) Semi Tractor	1900.210	9.00 Hrs	/Hrs		/Hrs		1,215	/Hrs			1,215	1,215
	Dump Fees by ton	1714.100	120.00 tn	/tn		45.00 /tn	5,400		/tn			5,400	5,400
	Toyota Forklift (5,000 lb) Conventional (L)	1900.300	3.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	7,500	1,500	9,000	9,000
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	9,000	3,000	12,000	12,000
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	1.00 mnth	8,000.00 /mnth	8,000	450.00 /mnth	450		10,400.00 /mnth	10,400	2,800	21,650	25,250
	Demo Equipment -	2220.140	1.00 ls	39.25 /mh		5,000.00 /ls	5,000		/ls			5,000	5,000
	Specialty Rigging -	1900.300	1.00 ls	/ls		2,500.00 /ls	2,500		1,800.00 /ls	1,800		4,300	4,300
	Air Compressor 185 cfm (66 HP) (L)	1900.010	2.00 Mnth	/Mnth		/Mnth			1,400.00 /Mnth	2,800	1,410	4,210	4,210
	60 lb Jack Hammer	1900.138	2.00 Mnth	/Mnth		/Mnth			500.00 /Mnth	1,000	200	1,200	1,200
	Mechanical Foreman	1000.100	8.00 wk	2,000.00 /wk	16,000	/wk			/wk			16,000	23,200
	Sub - Painting Interior (CMU walls and patch after demo aeration)	9910.200	1.00 ls	/ls		0.00 /ls	0	4,000	/ls			4,000	4,000
	DI Blind Flange 14"	15221.405	3.00 ea	39.25 /mh	471	350.00 /ea	1,050		/ea			1,521	1,733
	NBG Kit 125# SS 14in	15125.012	3.00 ea	39.25 /mh	118	200.00 /ea	600		/ea			718	771
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	4.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	6,000	400	6,400	6,400
	Scaffolding	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		1,000.00 /ls	1,000		2,500	2,500
	Note 3 - Remove Pipe Sleeve - 33D01	2220.605	3.00 ea	39.25 /mh	236	/ea			/ea			236	341
	Note 3 - Steel Plate 1/4" - 33D01	5001.122	3.00 ea	39.25 /mh	118	364.00 /ea	1,092		/ea			1,210	1,263
	Note 3 - Field Welding - Steel Plate - 33D01	5000.985	8.00 hrs	39.25 /mh	314	/hrs		1,800	/hrs			2,114	2,255
	Note 3 - Fill w/Concrete Flush w/Floor - 33D01	3150.200	6.00 cf	39.25 /mh	236	110.00 /cf	660		/cf			896	1,001
	Note 3 - Sub - Paint Steel Plates - 33D01	9910.200	1.00 ls	/ls		/ls		1,500	/ls			1,500	1,500
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		0.00 /ls	0		1,500	1,500
	Scaffolding	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		1,000.00 /ls	1,000		2,500	2,500
	Note 4 - Demo Receptacles & Conduit - 33D01	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Note 7 - Demo Roofing Ballast - 33D01	2220.680	1.00 ls	39.25 /mh	1,256	/ls			/ls			1,256	1,821
	Note 7 - Demo Roofing Membrane - 33D01	2220.680	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Note 7 - Repair Roofing Mem - 33D01	2220.680	1.00 ls	39.25 /mh	314	/ls		50,000	/ls			50,314	50,455
	Note 7 - Reinstall Roof Ballast - 33D01	2220.680	1.00 ls	39.25 /mh	1,884	/ls			/ls			1,884	2,732
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	4,600.00 /mnth	1,150	450.00 /mnth	113		10,400.00 /mnth	2,600	700	4,563	5,080
	Non Routine Task Safety - Roof Work	1116.200	1.00 ls	39.25 /mh	628	500.00 /ls	500		/mh			1,128	1,411
	Note 8 - Demo High Pressure Air Line - 33D01	2220.620	1.00 ls	39.25 /mh	1	/ls			/ls			1	1
	Note 8 - Provide 1/2" Quick Connect & Isolation Valve 33D01	2220.620	1.00 ls	39.25 /mh	1	/ls			/ls			1	1
	Note 3 - Grind/Patch/Cut Back Rebar & Coat w/Epoxy - 33D02	3350.130	56.00 ea	39.25 /mh	769	5.00 /ea	280		/ea			1,049	1,395
	Note 4 - Demo 42" Sleeve	2220.605	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Note 4 - Grind/Patch/Cut Back Anchors & Coat w/Epoxy - 33D02	3350.130	8.00 ea	39.25 /mh	110	5.00 /ea	40		/ea			150	199
	Note 1 - Temporary Protect Exisitng Conduit - 33D04	1116.200	1.00 ls	/ls		750.00 /ls	750		/ls			750	750
	Demo - North Aeration Complex - 33D01		1.00 lf		94,290		47,306	68,915		43,100	10,010	263,621	306,052
	DEMO Demolition				94,290		47,306	68,915		43,100	10,010	263,621	306,052
	33 - NA North Aeration				94,290		47,306	68,915		43,100	10,010	263,621	306,052
	36 - SC 3&4 Secondary Clarifiers #3 and #4												
	DEMO Demolition												
	02-2e Demo Secondary Clarifier 3 Mechanism - 36D01												
	Note 1 - Remove Weir & Scum Baffle	2220.140	269.00 lf	39.25 /mh	1,320	/lf			/lf			1,320	1,914
	Note 1 - Grind Back Anchor Bolts, Epoxy & Patch	2220.140	200.00 ea	39.25 /mh	3,925	10.00 /ea	2,000		/ea			5,925	7,691
	Note 2 - Preserve Mecahnism Anchors	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Remove Clarifier Mechanism	2220.140	1.00 ls	39.25 /mh	1,256	/ls			/ls			1,256	1,821
	Remove Access Walkway	2220.140	1.00 ls	39.25 /mh	942	/ls			/ls			942	1,366
	Remove Rotating Scum Pipe	2220.140	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Protect Baffle In Place	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Protect Scum Pipe In Place	2220.140	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.50 mnth	8,800.00 /mnth	4,400	450.00 /mnth	225		10,400.00 /mnth	5,200	1,400	11,225	13,205
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Torch Set and Ocy/Acet.	1900.300	1.00 Mnth	/Mnth		1,500.00 /Mnth	1,500		0.00 /Mnth	0		1,500	1,500
	Scaffolding	1900.300	2.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	2,000	300	2,300	2,300
	Note 3 - Protect Density Current Baffles	2220.140	1.00 ls	39.25 /mh	393	200.00 /ls	200		/ls			593	769
	Note 4 - Remove & Replace FRP Effluent Launder Covers	2220.140	1.00 ls	39.25 /mh	9,420	200.00 /ls	200		/ls			9,620	13,859
	Note 5 - Clean & Inspect Sludge Pipe	2220.140	1.00 ls	39.25 /mh	942	100.00 /ls	100	3,500	/ls			4,542	4,966
	Remove NPW Pipe Along Access Bridge	2220.140	1.00 ls	39.25 /mh	942	500.00 /ls	500		/ls			1,442	1,866
	Protect Anchor Bolts at Bridge	2220.140	1.00 ls	39.25 /mh	157	50.00 /ls	50		/ls			207	278
	Salvage for Reinstallation Stair Treads & Support Channels	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Dumpster Rental/Pick up	1714.100	2.00 ea	/ea		650.00 /ea	1,300		/ea			1,300	1,300

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Demo Secondary Clarifier 3 Mechanism - 36D01		1.00 If		25,423		6,075	3,500		10,800	3,200	48,998	60,439
	02-2e Demo Secondary Clarifier 4 Mechanism - 36D03												
	Note 3 - Remove Weir & Scum Baffle	2220.140	233.00 If	39.25 /mh	1,143	/lf			/lf			1,143	1,658
	Note 3 - Grind Back Anchor Bolts, Epoxy & Patch	2220.140	180.00 ea	39.25 /mh	3,533	10.00 /ea	1,800		/ea			5,333	6,922
	Note 2 - Preserve Mecahnism Anchors	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Remove Clarifier Mechanism	2220.140	1.00 ls	39.25 /mh	1,256	/ls			/ls			1,256	1,821
	Remove Access Walkway	2220.140	1.00 ls	39.25 /mh	942	/ls			/ls			942	1,366
	Remove Rotating Scum Pipe	2220.140	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	Protect Baffle In Place	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Protect Scum Pipe In Place	2220.140	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.50 mnth	8,800.00 /mnth	4,400	450.00 /mnth	225		10,400.00 /mnth	5,200	1,400	11,225	13,205
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Torch Set and Ocy/Acet.	1900.300	1.00 Mnth	/Mnth		1,500.00 /Mnth	1,500		0.00 /Mnth	0		1,500	1,500
	Scaffolding	1900.300	2.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	2,000	300	2,300	2,300
	Note 1 - Clean & Inspect Sludge Piping Hopper to Wye	2220.140	1.00 ls	39.25 /mh	942	100.00 /ls	100	3,500	/ls			4,542	4,966
	Note 4 - Remove & Replace Effluent Launder Covers	2220.140	1.00 ls	39.25 /mh	9,420	/ls			/ls			9,420	13,659
	Note 5 - Cap Sludge Draw Off Piping	2220.140	1.00 ls	39.25 /mh	314	2,000.00 /ls	2,000		/ls			2,314	2,455
	Remove NPW Pipe Along Access Bridge	2220.140	1.00 ls	39.25 /mh	942	500.00 /ls	500		/ls			1,442	1,866
	Salvage for Reinstallation Stair Treads & Support Channels	2220.140	1.00 ls	39.25 /mh	314	/ls			/ls			314	455
	Protect Anchor Bolts for Bridge	2220.140	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Dumpster Rental/Pick up	1714.100	2.00 ea	/ea		650.00 /ea	1,300		/ea			1,300	1,300
	Demo Secondary Clarifier 4 Mechanism - 36D03		1.00 If		24,776		7,425	3,500		10,800	3,200	49,701	60,850
	DEMO Demolition				50,199		13,500	7,000		21,600	6,400	98,699	121,288
	36 - SC 3&4 Secondary Clarifiers #3 and #4				50,199		13,500	7,000		21,600	6,400	98,699	121,288
	45 - RELEC Reuse Electrical Room												
	DEMO Demolition												
	02-2b Demo Vertical Turbine Pumps - 45D01												
	Open Roof Scuttle	2220.140	3.00 ea	39.25 /mh	118	/ea			/ea			118	171
	Remove Vertical Turbine Pumps	2220.140	3.00 ea	39.25 /mh	2,826	/ea			/ea			2,826	4,098
	Note 1 - Remove Piping to Header	2220.140	3.00 ea	39.25 /mh	1,413	/ea			/ea			1,413	2,049
	Note 1 - Remove Valves	2220.140	6.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Note 1 - Remove Pipe Supports	2220.140	6.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Close Roof Scuttle	2220.140	3.00 ea	39.25 /mh	118	/ea			/ea			118	171
	Remove Checker Plate	2220.140	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	8,800.00 /mnth	2,200	450.00 /mnth	113		10,400.00 /mnth	2,600	700	5,613	6,603
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Torch Set and Ocy/Acet.	1900.300	0.25 Mnth	/Mnth		1,500.00 /Mnth	375		0.00 /Mnth	0		375	375
	Note 2 - Demo Pump Pad - Rebar to Remain	2220.083	6.00 cy	39.25 /mh	4,710	/cy			/cy			4,710	6,830
	Note 2 - Protect Work Area from Dust	2314.600	6.00 days	39.25 /mh	471	100.00 /days	600		/days			1,071	1,283
	60 lb Jack Hammer	1900.138	0.30 Mnth	/Mnth		/Mnth			500.00 /Mnth	150	30	180	180
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.30 Mnth	/Mnth		/Mnth			1,400.00 /Mnth	420	212	632	632
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	2,160	900	3,060	3,060
	Trucking Demo Materials	2220.980	3.00 hr	39.25 /mh		/hr		375	/hr			375	375
	Dump Fees	2220.980	12.00 tn	/tn		45.00 /tn	540		/tn			540	540
	Note 4 - Demo Electrical Housekeeping Pads	2220.083	1.75 cy	39.25 /mh	1,099	/cy			/cy			1,099	1,594
	Note 4 - Protect Work Area from Dust	2314.600	3.00 days	39.25 /mh	236	100.00 /days	300		/days			536	641
	60 lb Jack Hammer	1900.138	0.15 Mnth	/Mnth		/Mnth			500.00 /Mnth	75	15	90	90
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.15 Mnth	/Mnth		/Mnth			1,400.00 /Mnth	210	106	316	316
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,080	450	1,530	1,530
	Trucking Demo Materials	2220.980	3.00 hr	39.25 /mh		/hr		375	/hr			375	375
	Dump Fees	2220.980	4.00 tn	/tn		58.00 /tn	232		/tn			232	232
	Checkered Plate 1/4"	5001.122	91.00 sf	39.25 /mh	446	0.00 /sf	0	4,550	/sf			4,996	5,197
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		/ls	0		1,500	1,500
	Bush Hammer Slab	2220.205	91.00 sf	39.25 /mh	143	/sf			/ch			143	207
	Epoxy Grout per Detail SD820	3150.200	91.00 sf	39.25 /mh	714	20.00 /sf	1,820		/sf			2,534	2,856
	Water Cure	3390.170	91.00 sf	39.25 /mh	36	1.00 /sf	91		/sf			127	143
	Demo 12" Blind Flange	2220.605	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Demo 6" Surge Relief Valve	2220.840	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Demo Vertical Turbine Pumps - 45D01		1.00 If		16,727		5,571	5,300		8,495	3,162	39,255	46,782
	DEMO Demolition				16,727		5,571	5,300		8,495	3,162	39,255	46,782
	45 - RELEC Reuse Electrical Room				16,727		5,571	5,300		8,495	3,162	39,255	46,782

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	013521.00 Selective Alterations & Demolition				499,569		326,323	750,678		400,853	192,116	2,169,539	2,394,345
015000.00	Temporary Facilities & Controls												
	00 - GEN General												
	GEN General												
	015- Construction Field Offices - Contractor												
	MCI Office Trailer Double Wide 60'	1672.100	30.00 Mnth	/Mnth		2,850.00 /Mnth	85,500		/Mnth			85,500	85,500
	Trailer Mob and Demob and tie down	1672.100	1.00 ls	/ls		16,000.00 /ls	16,000		/ls			16,000	16,000
	Office Supply & Equip - GC Monthly	1672.200	30.00 Mnth	/Mnth		750.00 /Mnth	22,500		/Mnth			22,500	22,500
	Office Supply & Equip - GC Lump Sum Furniture	1672.200	1.00 ls	/ls		5,000.00 /ls	5,000		/ls			5,000	5,000
	Clean Rock	2305.050	100.00 bcy	/cy		38.00 /ton	6,156		/cy			6,156	6,156
	Mob & Demob Labor	1900.210	160.00 hr	39.25 /mh	6,280	/hr			/hr			6,280	9,106
	40' Storage Trailer	1900.142	72.00 Mnth	/Mnth		/Mnth			300.00 /Mnth	21,600	0	21,600	21,600
	Construction Field Offices - Contractor		104.00 wk		6,280		135,156			21,600		163,036	165,862
	016- Construction Field Offices - Engineer												
	Inspector's Trailer 12X40	1672.100	30.00 Mnth	/Mnth		1,200.00 /Mnth	36,000		/Mnth			36,000	36,000
	Trailer Mob and Demob	1672.100	1.00 ls	/ls		4,600.00 /ls	4,600		/ls			4,600	4,600
	Office Supply & Equip, internet Monthly	1672.200	30.00 Mnth	/Mnth		750.00 /Mnth	22,500		/Mnth			22,500	22,500
	Office Supply & Equip - Insp Lump Sum	1672.200	1.00 ls	/ls		5,500.00 /ls	5,500		/ls			5,500	5,500
	Office Supply Weekly cleaning	1672.200	104.00 wk	39.25 /mh		250.00 /wk	26,000		/mh			26,000	26,000
	Mob & Demob Labor	1900.210	120.00 hr	39.25 /mh	4,710	/hr			/hr			4,710	6,830
	Clean Rock	2305.050	50.00 bcy	/cy		38.00 /ton	3,078		/cy			3,078	3,078
	Construction Field Offices - Engineer		104.00 wk		4,710		97,678					102,388	104,508
	GEN General				10,990		232,834			21,600		265,424	270,370
	00 - GEN General				10,990		232,834			21,600		265,424	270,370
	015000.00 Temporary Facilities & Controls				10,990		232,834			21,600		265,424	270,370
015617.00	Erosion & Sediment Control												
	00 - SITE Site												
	DIRT Dirtwork												
	0213- Temporary Erosion Control												
	Cocnrete wash out	2370.150	2.00 ea	39.25 /mh	1,884	750.00 /ea	1,650		/ea			3,534	4,382
	Silt Fence	2370.150	2,000.00 lf	39.25 /mh	3,925	1.00 /lf	2,200		/lf			6,125	7,891
	Tacifier stock pile for Winter	2370.150	1.00 ls	39.25 /mh		0.00 /ls	0	30,000	/ls			30,000	30,000
	Stone @ Entrance	2305.350	185.00 bcy	39.25 /mh	1,815	50.00 /ton	15,263		/cy			17,078	17,895
	Rock Socks	2305.350	120.00 ea	39.25 /mh	4,710	25.00 /ton	5,445		/cy			10,155	12,275
	Weekly maintenance	1714.100	112.00 wk	39.25 /mh	43,960	50.00 /wk	5,600		/wk			49,560	69,342
	Bobcat Skid Steer (85hp)- track (L) with Broom	1900.131	14.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	58,800	28,000	86,800	86,800
	Street sweeping sub	2333.010	112.00 wk	39.25 /mh		/Hrs		44,800	/Hrs			44,800	44,800
	(3rd Party) Dump Truck, 10 wheel (concrete Spoils 371 cy)	1900.210	122.00 Hrs	/Hrs		/Hrs		16,470	/Hrs			16,470	16,470
	Project Engineer (SWMP Plan and updates)	1006.100	24.00 wk	-	-	/wk			75.00 /ea	1,800	66,720	68,520	68,520
	Dump Fees by CY	1714.100	556.00 cy	/cy		10.00 /cy	5,560		/cy			5,560	5,560
	Clean Rock at laydown area	2305.050	200.00 bcy	/cy		38.00 /ton	12,312		/cy			12,312	12,312
	Vehicle Tracking Mat (7'x12') Plastic	1900.300	24.00 Mnth	/Mnth		/Mnth			400.00 /Mnth	9,600	960	10,560	10,560
	Curb ramps and blocks	1900.300	24.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	4,800	0	4,800	4,800
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	Import Road Base Class 6	2305.100	400.00 bcy	/cy		25.00 /ton	18,000		/cy			18,000	18,000
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	Temporary Erosion Control		1.00 ls		56,294		66,030	91,270		84,500	99,555	397,649	422,981
	DIRT Dirtwork				56,294		66,030	91,270		84,500	99,555	397,649	422,981
	00 - SITE Site				56,294		66,030	91,270		84,500	99,555	397,649	422,981
	015617.00 Erosion & Sediment Control				56,294		66,030	91,270		84,500	99,555	397,649	422,981
017519.00	Water Leakage Test for Concrete Structures												
	00 - GEN General												
	CON Concrete												
	019-100 Water Test Basin EQ (Both sides seperately)												
	Water Test Basins	3995.200	2.00 ea	39.25 /mh	2,512	/ea			/ea			2,512	3,642
	Test Water	3995.200	2.00 ls	/ls		/ls			/ls				
	Pumps	3995.200	2.00 ls	/ls		/ls			/ls				
	Temporary Bulkheads	3995.200	6.00 ls	39.25 /mh	942	/ls			/ls			942	1,366
	Hose and Acc	3995.200	2.00 ls	/ls		/ls			/ls				
	Urethane Injection System	3995.200	2.00 ls	39.25 /mh	37,680	7,500.00 /ls	15,000		1,000.00 /ls	2,000		54,680	71,636
	Water Test Basin EQ (Both sides seperately)				41,134		15,000			2,000		58,134	76,644
	019-100 Water Test Basin Primary Clarifier												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	019-100 Water Test Basin Primary Clarifier												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	Test Water	3995.200	1.00 ls	/ls		/ls			/ls				
	Pumps	3995.200	1.00 ls	/ls		/ls			/ls				
	Temporary Bulkheads	3995.200	3.00 ls	39.25 /mh	471	/ls			/ls			471	683
	Hose and Acc	3995.200	1.00 ls	/ls		/ls			/ls				
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	18,840	5,000.00 /ls	5,000		1,000.00 /ls	1,000		24,840	33,318
	Water Test Basin Primary Clarifier				20,567		5,000			1,000		26,567	35,822
	019-100 Water Test Basin Weir Structure												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	Test Water	3995.200	1.00 ls	/ls		/ls			/ls				
	Pumps	3995.200	1.00 ls	/ls		/ls			/ls				
	Temporary Bulkheads	3995.200	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Hose and Acc	3995.200	1.00 ls	/ls		/ls			/ls				
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	1,256	2,000.00 /ls	2,000		1,000.00 /ls	1,000		4,256	4,821
	Water Test Basin Weir Structure				2,669		2,000			1,000		5,669	6,870
	019-100 Water Test Basin West Primary Sludge Sump												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Temporary Bulkheads	3995.200	1.00 ls	39.25 /mh	39	/ls			/ls			39	57
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	1,256	5,000.00 /ls	5,000		1,000.00 /ls	1,000		7,256	7,821
	Water Test Basin West Primary Sludge Sump				1,609		5,000			1,000		7,609	8,333
	019-100 Water Test Basin EQ Pumps Sump												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	1,256	500.00 /ls	500		100.00 /ls	100		1,856	2,421
	Water Test Basin EQ Pumps Sump				1,570		500			100		2,170	2,877
	019-100 EQ Pump Station Wet Well												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Temporary Bulkheads	3995.200	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	1,256	2,500.00 /ls	2,500		1,000.00 /ls	1,000		4,756	5,321
	EQ Pump Station Wet Well				1,727		2,500			1,000		5,227	6,004
	019-100 Odor Control Sump Water Test												
	Water Test Basins	3995.200	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Urethane Injection System	3995.200	1.00 ls	39.25 /mh	1,256	500.00 /ls	500		100.00 /ls	100		1,856	2,421
	Odor Control Sump Water Test				1,570		500			100		2,170	2,877
	CON Concrete				70,846		30,500			6,200		107,546	139,427
	00 - GEN General				70,846		30,500			6,200		107,546	139,427
	017519.00 Water Leakage Test for Concrete Structures				70,846		30,500			6,200		107,546	139,427
026500.00	Underground Storage Tank Removal												
00 - SITE	Site												
DEMO	Demolition												
	02-2b Demo UST Diesel 2000 Gallons - 00C01 Note 13												
	Demo 30" OC Pipe	2220.605	20.00 lf	39.25 /mh	393	/lf			/lf			393	569
	Plug 30" OC Pipe (flowfill)	2230.100	2.00 ea	39.25 /mh	314	1,000.00 /ea	2,000		/ea			2,314	2,455
	Protect Exisitng Ductbank	2230.100	1.00 ea	39.25 /mh	314	500.00 /ea	500		/ea			814	955
	Protect Electrical Line	2230.100	1.00 ea	39.25 /mh	314	500.00 /ea	500		/ea			814	955
	Protect NPW Line	2230.100	1.00 ea	39.25 /mh	314	500.00 /ea	500		/ea			814	955
	Protect Gas Line	2230.100	1.00 ea	39.25 /mh	314	500.00 /ea	500		/ea			814	955
	Cut N Break Saw	1900.138	0.25 Mnth	/Mnth		1,000.00 /Mn th	250		500.00 /Mnth	125	38	413	413
	Demo UST Diesel 2000 Gallons - 00C01 Note 13		20.00 lf		1,963		4,250			125	38	6,375	7,258
0206-	Demo UST Diesel 2000 Gallons - 00C01 Note 10												
	Pothole Diesel UST	2230.100	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Excavate to Expose Tank	2333.010	800.00 cy	39.25 /mh	3,140	/cy			/cy			3,140	4,553
	Backfill Tank Excavation	2333.020	900.00 cy	39.25 /mh	1,766	/cy			/cy			1,766	2,561
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	920	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	500	120	620	620
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mn th			400.00 /Mnth	40	10	50	50
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	325	50	375	375
	Test and Dispose of Diesel	1714.100	2,000.00 gal	/gal		0.00 /gal	0	3,000	/gal			3,000	3,000
	Tank Area Assessment - Test Soil Samples	1900.210	10.00 ea	/ea		/ea		7,311	/ea			7,311	7,311
	Tank Area Assessment - Dispose of Contaminated Soil	2333.010	50.00 cy	39.25 /mh	245	/cy		10,350	/cy			10,595	10,706
	Remove Tank from Ground	2333.010	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Secure and Clean Tank	2333.010	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Dispose of Residuals - 55 Gallon Drum	2333.010	1.00 ea	39.25 /mh	79	0.00 /ea	0	1,500	/ea			1,579	1,614
	Cut and Dismantle Tank	2333.010	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Dispose of Tank	2333.010	1.00 ea	39.25 /mh	39	0.00 /ea	0	2,875	/ea			2,914	2,932

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0206- Demo UST Diesel 2000 Gallons - 00C01 Note 10												
	Contaminated Soil - Test Soil Samples	2333.010	6.00 ea	39.25 /mh		0.00 /ea	0	22,519	/ea			22,519	22,519
	Contaminated Soil - Dispose of Contaminated Soil	2333.010	50.00 cy	39.25 /mh	245	0.00 /cy	0	17,661	/cy			17,906	18,017
	Import Structural Fill CDOT Class (?)	2305.100	100.00 bcy	/cy		25.00 /ton	4,500		/cy			4,500	4,500
	UST Removal Sub Basic removal	10615.100	1.00 ls	/ls		/ls		23,241	/ls			23,241	23,241
	UST Removal Sub Bond	10615.100	1.00 ls	/ls		/ls		4,198	/ls			4,198	4,198
	Demo UST Diesel 2000 Gallons - 00C01 Note 10		40.00 lf		7,399		4,500	92,655		3,585	1,280	109,419	112,748
	DEMO Demolition				9,361		8,750	92,655		3,710	1,318	115,794	120,006
	00 - SITE Site				9,361		8,750	92,655		3,710	1,318	115,794	120,006
	026500.00 Underground Storage Tank Removal				9,361		8,750	92,655		3,710	1,318	115,794	120,006
033000.00	Cast In Place Concrete												
	00 - GEN General												
	CON Concrete												
	014- Winter Conditions for concrete												
	Winter Conditions	1572.100	8.00 Mnth	/Mnth		4,000.00 /Mn th	32,000		/Mnth			32,000	32,000
	Labor Winter Protect	1572.100	1.00 ls	39.25 /mh	149,150	0.00 /ls	0		/ls			149,150	216,268
	2012 Allmand Self Cont. 1M BTU Heater(In @ 4.0 gal/hr w/ 2 burners+1 gal/hr Gen running *3 24/7) (L)	1900.400	10.00 Mnth	/Mnth		350.00 /Mn th	3,500		4,500.00 /Mnth	45,000	65,000	113,500	113,500
	Snow Shovel Ground Level	1572.300	200.00 mnhr	39.25 /mh	7,850	/mn hr			/mnhr			7,850	11,383
	Shoveling and cover material	1572.300	8.00 Mnth	/Mnth		250.00 /Mn th	2,000		/Mnth			2,000	2,000
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	Ground Heater E2200 (In @ 1.1 gal/hr *3 24/7) (L) ((OWNED ONLY-50% DISCOUNTED RATE)	1900.400	4.00 Mnth	/Mnth		/Mn th			4,300.00 /Mnth	17,200	15,200	32,400	32,400
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	7,600	4,000	11,600	11,600
	Winter temp sensors	1572.100	200.00 ea	/ea		125.00 /ea	25,000		/ea			25,000	25,000
	Purchase 4ea temp heating boxes	1500.100	4.00 ea	/ea		1,500.00 /ea	6,000		/ea			6,000	6,000
	Winter Conditions for concrete		8.00 mo		157,000		68,500			77,000	87,200	389,700	460,350
0380-	Concrete Equipment												
	Razorback Screed	3995.100	2.00 Mnth	/LS		/LS			2,000.00 /LS	4,000		4,000	4,000
	Troweling Machine	3995.100	8.00 Mnth	/Mnth		/Mn th			350.00 /Mnth	2,800		2,800	2,800
	Concrete Crane Buckets	3995.100	24.00 Mnth	/Mnth		/Mn th			150.00 /Mnth	3,600		3,600	3,600
	Generators	3995.100	24.00 Mnth	/Mnth		/Mn th			800.00 /Mnth	19,200		19,200	19,200
	Concrete Vibrators	3995.100	24.00 Mnth	/Mnth		/Mn th			800.00 /Mnth	19,200		19,200	19,200
	Formwork Freight Gang Forms	3150.200	14.00 ld	/ld		/ld			/ld		63,000	63,000	63,000
	Formwork Freight Shoring/ Small Forms	3150.200	25.00 ld	/ld		/ld			/ld		37,500	37,500	37,500
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	11.00 mnth	8,800.00 /mnth	96,800	450.00 /mn th	4,950		10,400.00 /mnth	114,400	30,800	246,950	290,510
	Crane Mob by Sub	1900.100	1.00 ea	/ea		/ea		2,500	/ea			2,500	2,500
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	21.50 mnth	8,800.00 /mnth	189,200	550.00 /mn th	11,825		17,500.00 /mnth	376,250	80,625	657,900	743,040
	Crane Mob by Sub	1900.100	1.00 ea	/ea		/ea		10,000	/ea			10,000	10,000
	Concrete Formwork Design Fees	1500.100	40.00 sht	/sht		/sht		16,000	/sht			16,000	16,000
	Air Compressor 185 cfm (66 HP) (L)	1900.010	24.00 Mnth	/Mnth		/Mn th			1,400.00 /Mnth	33,600	16,920	50,520	50,520
	Welding Machine 300 amp (33 HP) (L)	1900.012	8.00 Mnth	/Mnth		/Mn th			450.00 /Mnth	3,600	4,400	8,000	8,000
	Concrete Foreman	1000.100	78.00 wk	2,000.00 /wk	156,000	/wk			/wk			156,000	226,200
	Pickup	1900.210	30.00 Mnth	/Mnth		/Mn th			1,900.00 /Mnth	57,000	15,000	72,000	72,000
	Pickup with trailer	1900.210	4.00 Mnth	/Mnth		/Mn th			1,900.00 /Mnth	7,600	2,000	9,600	9,600
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	14.00 Mnth	/Mnth		/Mn th			4,500.00 /Mnth	63,000	21,000	84,000	84,000
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	48.00 Mnth	/Mnth		/Mn th			1,500.00 /Mnth	72,000	4,800	76,800	76,800
	Concrete Pump 50' wall pipes for caissons	1807.100	6.00 ea	0.00 /ea	0	/ea			850.00 /ea	5,100		5,100	5,100
	Boom Lift (L)	1900.300	6.00 Mnth	/Mnth		/Mn th			5,500.00 /Mnth	33,000	7,500	40,500	40,500
	Scaffolding and stair tower access	1900.300	30.00 Mnth	/Mnth		/Mn th			900.00 /Mnth	27,000		27,000	27,000
	Safety	1116.100	1.00 ls	/ls		40,000.00 /ls	40,000		/ls			40,000	40,000
	Concrete Equipment				442,000		56,775	28,500		841,350	283,545	1,652,170	1,851,070
0385-	Reinforcement												
	Rebar Supply and install	3200.980	1.00 ls	/ls		0.00 /ls	0	1,950,000	/ls			1,950,000	1,950,000
	Rebar Install (sub)	3200.980	1.00 tn	/tn		/tn		0	/tn				
	Rebar Chairs stainless	3200.980	9,000.00 ea	/ea		4.00 /ea	36,000		/ea			36,000	36,000

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0385- Reinforcement												
	Rebar Bricks	3200.980	6,000.00 ea	/ea		1.00 /ea	6,000		/ea			6,000	6,000
	Rebar Acc: wire and acc	3200.980	1.00 ls	/ls		2,500.00 /ls	2,500		/ls			2,500	2,500
	Deck and Walk Bolster stainless	3200.980	8,300.00 lf	/lf		3.00 /lf	24,900		/lf			24,900	24,900
	Rebar Supply Masory	3200.980	1.00 tn	/tn		20,000.00 /ton	20,000		/tn			20,000	20,000
	Rebar Install Contingency	3200.980	1.00 tn	39.25 /mh		/tn		0	/tn				
	Rebar Supply Stud Heads on Caissons	3200.980	1.00 ls	/ls		18,917.00 /ls	18,917		/ls			18,917	18,917
	Reinforcement						108,317	1,950,000				2,058,317	2,058,317
	CON Concrete				599,000		233,592	1,978,500		918,350	370,745	4,100,187	4,369,737
	00 - GEN General				599,000		233,592	1,978,500		918,350	370,745	4,100,187	4,369,737
00 - SITE	Site												
	CON Concrete												
	0300- Curb and Gutter 00C11												
	Concrete Curb and Gutter Formwork - Straight	3100.120	582.00 lf	39.25 /mh	7,995	5.00 /lf	2,910		/lf			10,905	14,503
	Concrete Curb and Gutter Formwork - Radius	3100.120	170.00 lf	39.25 /mh	3,336	5.00 /lf	850		/lf			4,186	5,688
	4500 psi Concrete	3310.100	83.00 cy	/cy		210.00 /cy	18,650		/cy			18,650	18,650
	Truck Place Curbs	3310.290	83.00 cy	39.25 /mh	10,457	/cy			/cy			10,457	15,163
	Concrete Curb and Gutter - Finish	3350.125	2,250.00 sf	39.25 /mh	4,416	/sf			/sf			4,416	6,403
	Place Road Base Under Curb	2305.300	160.00 cy	39.25 /mh	6,280	/cy			/cy			6,280	9,106
	Import Gravel Base	2305.250	160.00 bcy	/cy		25.00 /ton	7,400		/cy			7,400	7,400
	Oil Curb and Gutter Forms	3100.310	2,250.00 sf	39.25 /mh	177	0.06 /sf	144		/sf			321	400
	Curb and Gutter Excavation and Backfill	2303.100	753.00 lf	39.25 /mh	2,956	0.30 /lf	226		/lf			3,181	4,511
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	1,900	1,000	2,900	2,900
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	1,625	250	1,875	1,875
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			400.00 /Mnth	200	50	250	250
	Rebar Supply	3200.980	6.03 tn	/tn		1,600.00 /tn	9,648		/tn			9,648	9,648
	Rebar Install Self	3200.980	6.03 tn	39.25 /mh	6,627	/tn			/tn			6,627	9,609
	Curb and Gutter 00C11		752.00 lf		42,244		39,828			3,725	1,300	87,097	106,106
	0300- Curb and Gutter 00C12												
	Concrete Curb and Gutter Formwork - Straight	3100.120	1,500.00 lf	39.25 /mh	20,606	5.00 /lf	7,500		/lf			28,106	37,379
	Concrete Curb and Gutter Formwork - Radius	3100.120	350.00 lf	39.25 /mh	6,869	5.00 /lf	1,750		/lf			8,619	11,710
	4500 psi Concrete	3310.100	205.56 cy	/cy		210.00 /cy	46,188		/cy			46,188	46,188
	Truck Place Curbs	3310.290	205.56 cy	39.25 /mh	25,899	/cy			/cy			25,899	37,553
	Concrete Curb and Gutter - Finish	3350.125	5,550.00 sf	39.25 /mh	10,892	/sf			/sf			10,892	15,793
	Place Road Base Under Curb	2305.300	411.11 cy	39.25 /mh	16,136	/cy			/cy			16,136	23,397
	Import Gravel Base	2305.250	411.11 bcy	/cy		25.00 /ton	19,014		/cy			19,014	19,014
	Oil Curb and Gutter Forms	3100.310	5,550.00 sf	39.25 /mh	436	0.06 /sf	355		/sf			791	987
	Curb and Gutter Excavation and Backfill	2303.100	1,850.00 lf	39.25 /mh	7,261	0.30 /lf	555		/lf			7,816	11,084
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	6,500	1,000	7,500	7,500
	Mikasa Jumping Jack Compactor (L)	1900.138	1.00 Mnth	/Mnth		/Mn th			400.00 /Mnth	400	100	500	500
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	Rebar Supply	3200.980	15.30 tn	/tn		1,600.00 /tn	24,480		/tn			24,480	24,480
	Rebar Install Self	3200.980	15.30 tn	39.25 /mh	16,815	/tn			/tn			16,815	24,381
	Curb and Gutter 00C12		1,850.00 lf		104,913		99,843			10,700	3,100	218,556	265,767
	0300- Curb and Gutter 00C13												
	Concrete Curb and Gutter Formwork - Straight	3100.120	160.00 lf	39.25 /mh	2,198	5.00 /lf	800		/lf			2,998	3,987
	Concrete Curb and Gutter Formwork - Radius	3100.120	20.00 lf	39.25 /mh	393	5.00 /lf	100		/lf			493	669
	4500 psi Concrete	3310.100	20.00 cy	/cy		210.00 /cy	4,494		/cy			4,494	4,494
	Truck Place Curbs	3310.290	20.00 cy	39.25 /mh	2,520	/cy			/cy			2,520	3,654
	Concrete Curb and Gutter - Finish	3350.125	540.00 sf	39.25 /mh	1,060	/sf			/sf			1,060	1,537
	Place Road Base Under Curb	2305.300	40.00 cy	39.25 /mh	1,570	/cy			/cy			1,570	2,277
	Import Gravel Base	2305.250	40.00 bcy	/cy		25.00 /ton	1,850		/cy			1,850	1,850
	Oil Curb and Gutter Forms	3100.310	360.00 sf	39.25 /mh	28	0.06 /sf	23		/sf			51	64
	Curb and Gutter Excavation and Backfill	2303.100	180.00 lf	39.25 /mh	707	0.30 /lf	54		/lf			761	1,078
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	950	500	1,450	1,450
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	813	125	938	938
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mn th			400.00 /Mnth	100	25	125	125
	Rebar Supply	3200.980	1.50 tn	/tn		1,600.00 /tn	2,400		/tn			2,400	2,400
	Rebar Install Self	3200.980	1.50 tn	39.25 /mh	1,649	/tn			/tn			1,649	2,390
	Curb and Gutter 00C13		180.00 lf		10,123		9,721			1,863	650	22,357	26,912
	0302- Generator Slab and slope pads on East side 05S01												
	4500 psi Concrete	3310.100	101.00 cy	/cy		210.00 /cy	22,695		/cy			22,695	22,695
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	101.00 cy	39.25 /mh	8,484	/cy			/cy		3,782	12,266	16,084
	Formwork S.O.G. Edge Form > 1'	3100.120	392.00 sf	39.25 /mh	5,385	2.00 /sf	823		/sf			6,208	8,632
	Formwork S.O.G. Edge Form < 1'	3100.120	36.00 sf	39.25 /mh	495	2.00 /sf	76		/sf			570	793
	Formwork S.O.G. Const Joints > 1'	3100.120	62.00 sf	39.25 /mh	1,217	2.00 /sf	130		/sf			1,347	1,894
	CJ Prep Slab	3350.170	62.00 sf	39.25 /mh	61	0.15 /sf	9		/sf			70	98

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- Generator Slab and slope pads on East side 05S01												
	Finegrade Below Concrete	3150.650	919.14 sf	39.25 /mh	505	/sf			/sf			505	732
	Finish- Hard Trowel	3350.110	919.14 sf	39.25 /mh	505	0.01 /sf	9		/sf			514	742
	Liquid Curing Compounds	3390.170	919.14 sf	39.25 /mh	72	0.08 /sf	69		/sf			141	174
	Blockouts in Concrete	3150.194	256.00 sf	39.25 /mh	3,517	2.00 /sf	512		/sf			4,029	5,611
	Chamfer 3/4"	3150.625	124.00 lf	39.25 /mh	243	0.25 /lf	33		/lf			276	385
	Road Base Below Concrete	2305.300	2.67 bcy	39.25 /mh	209	25.00 /ton	132		/cy			341	436
	Expansion Joint	3150.720	36.00 sf	39.25 /mh	141	3.00 /sf	113		/sf			255	318
	Expansion Joint Sealant	3150.720	24.00 lf	39.25 /mh	94	2.40 /lf	60		/lf			155	197
	Oil SOG Form	3100.310	392.00 sf	39.25 /mh	31	0.06 /sf	25		/sf			56	70
	Nails and Hardware	3150.200	392.00 sf	/sf		0.04 /sf	16		/sf			16	16
	Dimension Lumber	3150.200	392.00 sf	/sf		0.45 /sf	176		/sf			176	176
	Grout non shrink	3150.700	22.00 cf	39.25 /mh		115.00 /cf	2,530		/cf			2,530	2,530
	Grout back duct bank blackout	3601.100	1.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Caulking Expansion Joint and CJ	7920.300	32.00 lf	39.25 /mh	126	20.00 /tub e	102		/lf			228	284
	Generator Slab and slope pads on East side 05S01		101.00 cy		22,968		27,511				3,782	54,262	64,597
	0302- Sidewalks, Stoops and valley pans 00C11												
	4500 psi Concrete	3310.100	179.25 cy	/cy		210.00 /cy	40,278		/cy			40,278	40,278
	Slab Placement Count	3310.360	11.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	179.25 cy	39.25 /mh	15,056	/cy			/cy		6,713	21,769	28,544
	Formwork S.O.G. Edge Form < 1'	3100.120	810.54 sf	39.25 /mh	7,953	2.00 /sf	1,702		/sf			9,656	13,235
	Finegrade Below Concrete	3150.650	9,326.00 sf	39.25 /mh	5,125	/sf			/sf			5,125	7,431
	Finish- Hard Trowel	3350.110	9,326.00 sf	39.25 /mh	5,125	0.01 /sf	93		/sf			5,218	7,524
	Liquid Curing Compounds	3390.170	9,326.00 sf	39.25 /mh	732	0.08 /sf	699		/sf			1,432	1,761
	Blockouts in Concrete	3150.194	88.00 sf	39.25 /mh	1,209	2.00 /sf	176		/sf			1,385	1,929
	Road Base Below Concrete	2305.300	345.41 bcy	39.25 /mh	6,779	25.00 /ton	17,098		/cy			23,876	26,927
	Expansion Joint	3150.720	413.50 sf	39.25 /mh	1,623	3.00 /sf	1,303		/sf			2,926	3,656
	Expansion Joint Sealant	3150.720	827.00 lf	39.25 /mh	3,246	2.40 /lf	2,084		/lf			5,330	6,791
	Oil SOG Form	3100.310	810.54 sf	39.25 /mh	64	0.06 /sf	52		/sf			116	144
	Nails and Hardware	3150.200	810.54 sf	/sf		0.04 /sf	32		/sf			32	32
	Dimension Lumber	3150.200	810.54 sf	/sf		0.45 /sf	365		/sf			365	365
	Saw Cut S-O-G	3350.160	1,118.00 lf	39.25 /mh	1,316	0.50 /lf	559		0.50 /lf	559		2,434	3,027
	SOG Rebar	3210.104	8.76 tn	39.25 /mh	10,320	1,600.00 /tn	14,723		/tn			25,043	29,687
	WWM 6X6- W 1.4 Rolls	3220.110	6,306.58 sf	39.25 /mh	2,475	0.25 /sf	1,655		/sf			4,131	5,245
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	6,500	1,000	7,500	7,500
	Sidewalks, Stoops and valley pans 00C11		179.25 cy		61,022		80,820			10,859	9,713	162,414	189,874
	0302- Concrete sidewalks, valley pand, stoops and pads 00C12												
	4500 psi Concrete	3310.100	230.00 cy	/cy		210.00 /cy	51,681		/cy			51,681	51,681
	Pump Place Slab on Grade	3310.230	230.00 cy	39.25 /mh	19,319	/cy			/cy		8,614	27,932	36,626
	Formwork S.O.G. Edge Form < 1'	3100.120	1,850.00 sf	39.25 /mh	18,153	2.00 /sf	3,885		/sf			22,038	30,207
	Formwork S.O.G. Const Joints < 1'	3100.120	203.26 sf	39.25 /mh	3,670	2.00 /sf	427		/sf			4,097	5,748
	CJ Prep Slab	3350.170	203.26 sf	39.25 /mh	199	0.15 /sf	30		/sf			230	320
	Finegrade Below Concrete	3150.650	9,790.00 sf	39.25 /mh	5,380	/sf			/sf			5,380	7,800
	Finish- Hard Trowel	3350.110	9,790.00 sf	39.25 /mh	5,380	0.01 /sf	98		/sf			5,478	7,898
	Liquid Curing Compounds	3390.170	9,790.00 sf	39.25 /mh	769	0.08 /sf	734		/sf			1,503	1,849
	Blockouts in Concrete	3150.194	96.00 sf	39.25 /mh	1,319	2.00 /sf	192		/sf			1,511	2,104
	Road Base Below Concrete	2305.300	370.00 bcy	39.25 /mh	7,261	25.00 /ton	18,315		/cy			25,576	28,844
	Expansion Joint	3150.720	960.00 sf	39.25 /mh	3,768	3.00 /sf	3,024		/sf			6,792	8,488
	Expansion Joint Sealant	3150.720	960.00 lf	39.25 /mh	3,768	2.40 /lf	2,419		/lf			6,187	7,883
	Oil SOG Form	3100.310	1,930.56 sf	39.25 /mh	152	0.06 /sf	124		/sf			275	343
	Nails and Hardware	3150.200	1,727.30 sf	/sf		0.04 /sf	69		/sf			69	69
	Dimension Lumber	3150.200	1,727.30 sf	/sf		0.45 /sf	777		/sf			777	777
	Saw Cut S-O-G	3350.160	1,405.00 lf	39.25 /mh	1,654	0.50 /lf	703		0.50 /lf	703		3,059	3,804
	SOG Rebar	3210.104	27.50 tn	39.25 /mh	32,381	1,600.00 /tn	46,200		/tn			78,581	93,153
	WWM 6X6- W 1.4 Rolls	3220.110	963.00 sf	39.25 /mh	378	0.25 /sf	253		/sf			631	801
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	6,500	1,000	7,500	7,500
	Concrete sidewalks, valley pand, stoops and pads 00C12		217.20 cy		103,550		128,931			11,003	11,614	255,097	301,695
	0302- Cocnrete Sidewalks, stoops and valley pads 00C13												
	4500 psi Concrete	3310.100	11.11 cy	/cy		210.00 /cy	2,497		/cy			2,497	2,497
	Pump Place Slab on Grade	3310.230	11.11 cy	39.25 /mh	933	/cy			/cy		416	1,349	1,769
	Formwork S.O.G. Edge Form < 1'	3100.120	125.00 sf	39.25 /mh	1,227	2.00 /sf	263		/sf			1,489	2,041
	Formwork S.O.G. Const Joints < 1'	3100.120	5.00 sf	39.25 /mh	90	2.00 /sf	11		/sf			101	141
	CJ Prep Slab	3350.170	5.00 sf	39.25 /mh	5	0.15 /sf	1		/sf			6	8
	Finegrade Below Concrete	3150.650	600.00 sf	39.25 /mh	330	/sf			/sf			330	478
	Finish- Hard Trowel	3350.110	600.00 sf	39.25 /mh	330	0.01 /sf	6		/sf			336	484
	Liquid Curing Compounds	3390.170	600.00 sf	39.25 /mh	47	0.08 /sf	45		/sf			92	113
	Road Base Below Concrete	2305.300	22.22 bcy	39.25 /mh	436	25.00 /ton	1,100		/cy			1,536	1,732
	Expansion Joint	3150.720	60.00 sf	39.25 /mh	236	3.00 /sf	189		/sf			425	530
	Expansion Joint Sealant	3150.720	120.00 lf	39.25 /mh	471	2.40 /lf	302		/lf			773	985
	Oil SOG Form	3100.310	130.00 sf	39.25 /mh	10	0.06 /sf	8		/sf			19	23
	Nails and Hardware	3150.200	125.00 sf	/sf		0.04 /sf	5		/sf			5	5

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- Cocnrete Sidewalks, stoops and valley pads 00C13												
	Dimension Lumber	3150.200	125.00 sf	/sf		0.45 /sf	56		/sf			56	56
	Saw Cut S-O-G	3350.160	120.00 lf	39.25 /mh	141	0.50 /lf	60		0.50 /lf	60		261	325
	WWM 6X6- W 1.4 Rolls	3220.110	642.00 sf	39.25 /mh	252	0.25 /sf	169		/sf			421	534
	Cocnrete Sidewalks, stoops and valley pads 00C13		11.11 cy		4,508		4,711			60	416	9,695	11,723
	0302- Concrete outlet pad and grout rip rap 42" Storm Drain at lay down												
	4500 psi Concrete	3310.100	3.70 cy	/cy		210.00 /cy	832		/cy			832	832
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	3.70 cy	39.25 /mh	311	/cy			/cy		139	450	590
	Formwork S.O.G. Edge Form < 1'	3100.120	40.00 sf	39.25 /mh	550	2.00 /sf	84		/sf			634	881
	Finegrade Below Concrete	3150.650	100.00 sf	39.25 /mh	55	/sf			/sf			55	80
	Finish- Hard Trowel	3350.110	100.00 sf	39.25 /mh	55	0.01 /sf	1		/sf			56	81
	Liquid Curing Compounds	3390.170	100.00 sf	39.25 /mh	8	0.08 /sf	8		/sf			15	19
	Road Base Below Concrete	2305.300	25.00 bcy	39.25 /mh	491	25.00 /ton	1,238		/cy			1,728	1,949
	Oil SOG Form	3100.310	40.00 sf	39.25 /mh	3	0.06 /sf	3		/sf			6	7
	Nails and Hardware	3150.200	40.00 sf	/sf		0.04 /sf	2		/sf			2	2
	Dimension Lumber	3150.200	40.00 sf	/sf		0.45 /sf	18		/sf			18	18
	SOG Rebar	3210.104	0.46 tn	39.25 /mh	545	1,600.00 /tn	778		/tn			1,323	1,568
	Rip Rap Hand Place Grouted	2305.450	600.00 sf	39.25 /mh	6,594	50.00 /sf	30,000		/sf			36,594	39,561
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mn th			5,510.00 /Mnth	1,378	500	1,878	1,878
	Concrete outlet pad and grout rip rap 42" Storm Drain at lay down		3.70 cy		8,611		32,962			1,378	639	43,590	47,465
	CON Concrete				357,940		424,326			39,587	31,214	853,066	1,014,139
	00 - SITE Site				357,940		424,326			39,587	31,214	853,066	1,014,139
	00 - WS Weir Structure												
	CON Concrete												
	0302- Form Weir Trough Slab and Walls 00S10												
	4500 psi Concrete	3310.100	4.67 cy	/cy		210.00 /cy	1,049		/cy			1,049	1,049
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Truck Place Slab on Grade	3310.230	4.67 cy	39.25 /mh	1,568	/cy			/cy			1,568	2,274
	Formwork S.O.G. Edge Form > 1'	3100.120	103.50 sf	39.25 /mh	2,031	2.00 /sf	217		/sf			2,249	3,163
	Finegrade Below Concrete	3150.650	56.00 sf	39.25 /mh	31	/sf			/sf			31	45
	Finish- Hard Trowel	3350.110	56.00 sf	39.25 /mh	31	0.01 /sf	1		/sf			31	45
	Liquid Curing Compounds	3390.170	56.00 sf	39.25 /mh	4	0.08 /sf	4		/sf			9	11
	Blockouts in Concrete	3150.194	140.00 sf	39.25 /mh	2,748	2.00 /sf	280		/sf			3,028	4,264
	Chamfer 4"	3150.625	42.00 lf	39.25 /mh	82	3.00 /lf	132		/lf			215	252
	Oil SOG Form	3100.310	103.50 sf	39.25 /mh	8	0.06 /sf	7		/sf			15	18
	Nails and Hardware	3150.200	103.50 sf	/sf		0.04 /sf	4		/sf			4	4
	Dimension Lumber	3150.200	103.50 sf	/sf		0.45 /sf	47		/sf			47	47
	SOG Rebar	3210.104	0.58 tn	39.25 /mh	1,373	1,600.00 /tn	979		/tn			2,352	2,970
	Form Weir Trough Slab and Walls 00S10		4.67 cy		7,876		2,720					10,596	14,140
	0302- Weir Structure Concret general 00S10												
	Precast set misc metals embeds in troughs (\$\$ for bolts and Neoprene)	3410.120	1.00 ls	39.25 /mh	393	450.00 /ls	450		/ls			843	1,019
	Field Welding - Stainless	5000.985	8.00 hrs	39.25 /mh	314	/hrs		1,000	/hrs			1,314	1,455
	Grout Trough in Place	3601.100	16.00 cf	39.25 /mh	5,024	115.00 /cf	1,840		/cf			6,864	9,125
	Set Precast Troughs in Place	5001.130	2.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	Clean Weir Structure and pressure wash	2220.205	1.00 ls	39.25 /mh	2,512	/ls			/ls			2,512	3,642
	Vac Truck - Sub Pot Hole Existing	2333.010	8.00 Hr	39.25 /mh	314	/Hrs		2,800	/Hrs			3,114	3,255
	Weir Structure Concret general 00S10				9,813		2,290	3,800				15,903	20,318
	0302-B Weir Structure Fill Concrete 00S10												
	4500 psi Concrete	3310.100	2.44 cy	/cy		210.00 /cy	549		/cy			549	549
	Other Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	2.44 cy	39.25 /mh	821	/cy			/cy		92	913	1,282
	Finish- Hard Trowel	3350.110	33.00 sf	39.25 /mh	18	0.01 /sf	0		/sf			18	27
	Liquid Curing Compounds	3390.170	33.00 sf	39.25 /mh	3	0.08 /sf	2		/sf			5	6
	Oil SOG Form	3100.310	68.00 sf	39.25 /mh	5	0.06 /sf	4		/sf			10	12
	Nails and Hardware	3150.200	68.00 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	68.00 sf	/sf		0.45 /sf	31		/sf			31	31
	CJ Prep Slab 1/4 Amplitude	3350.170	60.00 sf	39.25 /mh	118	0.50 /sf	30		/sf			148	201
	Epoxy Bonding Agent	3150.200	60.00 sf	39.25 /mh	118	2.00 /sf	120		/sf			238	291
	2X4 platform at fill	3100.120	1.00 ls	39.25 /mh	1,256	250.00 /ls	263		/ls			1,519	2,084
	Weir Structure Fill Concrete 00S10		2.44 cy		2,339		1,002				92	3,432	4,485
	0303- Concrete Walls in Weir Structure 00S10												
	Pump Place Walls	3310.260	5.93 cy	39.25 /mh	996	/cy			/cy		254	1,249	1,697
	4500 psi Concrete	3310.100	5.93 cy	/cy		210.00 /cy	1,332		/cy			1,332	1,332
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Rented Form System 0-4'	3100.180	32.00 sf	39.25 /mh	628	2.00 /sf	67		/sf			695	978
	Rented Form System 8-12'	3100.180	288.00 sf	39.25 /mh	5,652	2.00 /sf	605		/sf			6,257	8,800
	Wall Bulkhead Forms	3150.192	32.00 sf	39.25 /mh	578	2.00 /sf	67		/sf			645	905
	CJ Prep Walls	3350.170	48.00 sf	39.25 /mh	47	0.15 /sf	7		/sf			54	75
	Finish- Top of Wall	3350.110	16.00 sf	39.25 /mh	9	0.01 /sf	0		/sf			9	13
	Liquid Curing Walls	3390.170	336.00 sf	39.25 /mh	13	0.08 /sf	25		/sf			38	44
	Grind/Patch Walls	3350.130	320.00 sf	39.25 /mh	151	0.05 /sf	16		/sf			167	235
	Blockouts in Concrete	3150.194	32.00 sf	39.25 /mh	440	2.00 /sf	64		/sf			504	701
	Waterstop Adeka or Swellstop	3510.610	64.00 lf	39.25 /mh	251	8.00 /lf	538		/lf			789	902
	Chamfer 3/4"	3150.625	48.00 lf	39.25 /mh	94	0.25 /lf	13		/lf			107	149

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0303- Concrete Walls in Weir Structure 00S10												
	Rub Walls	3350.140	320.00 sf	39.25 /mh	502	0.95 /sf	304		/sf			806	1,032
	Oil Wall Forms	3100.310	320.00 sf	39.25 /mh	25	0.06 /sf	20		/sf			46	57
	Nails and Hardware	3150.200	320.00 sf	/sf		0.04 /sf	13		/sf			13	13
	Form Ties 12"	3150.632	80.00 ea	/ea		1.85 /ea	148		/ea			148	148
	Dimension Lumber	3150.200	320.00 sf	/sf		0.45 /sf	144		/sf			144	144
	Rebar Templates	3200.980	16.00 lf	39.25 /mh	31	0.50 /lf	8		/lf			39	54
	Drill and Epoxy #5	3210.101	160.00 ea	39.25 /mh	1,884	5.00 /ea	840		/ea			2,724	3,572
	Epoxy Bond tie hole	3150.200	160.00 ea	39.25 /mh	314	1.00 /ea	160		/ea			474	615
	Concrete Walls in Weir Structure 00S10		5.93 cy		11,615		4,371				254	16,240	21,466
	0303- Concrete Pipe Collar Weir Structure 00S10												
	Pump Place Walls	3310.260	1.82 cy	39.25 /mh	610	/cy			/cy		78	687	962
	4500 psi Concrete	3310.100	1.82 cy	/cy		210.00 /cy	408		/cy			408	408
	Job Built with Plyform 4-8' one sided	3100.180	49.00 sf	39.25 /mh	1,923	4.00 /sf	206		/sf			2,129	2,995
	CJ Prep Walls	3350.170	7.00 sf	39.25 /mh	7	0.15 /sf	1		/sf			8	11
	Finish- Top of Wall	3350.110	7.00 sf	39.25 /mh	4	0.01 /sf	0		/sf			4	6
	Liquid Curing Walls	3390.170	49.00 sf	39.25 /mh	2	0.08 /sf	4		/sf			6	6
	Grind/Patch Walls	3350.130	49.00 sf	39.25 /mh	23	0.05 /sf	2		/sf			26	36
	Waterstop Adeka or Swellstop	3510.610	28.00 lf	39.25 /mh	110	8.00 /lf	235		/lf			345	395
	Oil Wall Forms	3100.310	49.00 sf	39.25 /mh	4	0.06 /sf	3		/sf			7	9
	Nails and Hardware	3150.200	49.00 sf	/sf		0.04 /sf	2		/sf			2	2
	Form Ties 12"	3150.632	24.50 ea	/ea		1.85 /ea	45		/ea			45	45
	Dimension Lumber	3150.200	49.00 sf	/sf		0.45 /sf	22		/sf			22	22
	Rebar Templates	3200.980	7.00 lf	39.25 /mh	14	0.50 /lf	4		/lf			17	23
	Drill and Epoxy #4	3210.101	35.00 ea	39.25 /mh	687	4.00 /ea	147		/ea			834	1,143
	CJ Prep Walls	3350.170	49.00 sf	39.25 /mh	48	0.15 /sf	7		/sf			55	77
	Epoxy Bonding Agent tie hole	3150.200	48.00 ea	39.25 /mh	94	1.00 /ea	48		/ea			142	185
	Concrete Pipe Collar Weir Structure 00S10		1.82 cy		3,525		1,134				78	4,737	6,324
	CON Concrete				35,168		11,517	3,800			423	50,908	66,733
	00 - WS Weir Structure				35,168		11,517	3,800			423	50,908	66,733
	16 - EQEQUIP EQ Equipment Room												
	CON Concrete												
	0302- EQ Equipment Room Base Slab 16S01												
	4500 psi Concrete	3310.100	42.00 cy	/cy		210.00 /cy	9,437		/cy			9,437	9,437
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	42.00 cy	39.25 /mh	3,528	/cy			/cy		1,573	5,101	6,688
	Formwork S.O.G. Edge Form > 1'	3100.120	726.00 sf	39.25 /mh	9,973	2.00 /sf	1,525		/sf			11,498	15,986
	Finegrade Below Concrete	3150.650	504.00 sf	39.25 /mh	277	/sf			/sf			277	402
	Finish- Hard Trowel	3350.110	504.00 sf	39.25 /mh	277	0.01 /sf	5		/sf			282	407
	Liquid Curing Compounds	3390.170	504.00 sf	39.25 /mh	40	0.08 /sf	38		/sf			77	95
	Blockouts in Concrete	3150.194	128.00 sf	39.25 /mh	1,758	2.00 /sf	256		/sf			2,014	2,806
	Crushed Rock Below Concrete	2305.300	20.00 bcy	39.25 /mh	589	38.00 /ton	1,421		/cy			2,010	2,275
	Oil SOG Form	3100.310	279.00 sf	39.25 /mh	22	0.06 /sf	18		/sf			40	50
	Nails and Hardware	3150.200	279.00 sf	/sf		0.04 /sf	11		/sf			11	11
	Dimension Lumber	3150.200	279.00 sf	/sf		0.45 /sf	126		/sf			126	126
	Slab Void - 12" with vapor barrier and masonite	3100.320	740.00 sf	39.25 /mh	1,743	8.00 /sf	6,512		/sf			8,255	9,039
	8 Mil. Vapor Barrier (special)	3150.630	1,144.00 sf	39.25 /mh	674	0.50 /sf	629		/sf			1,303	1,606
	Void Form Retainer	3100.320	268.00 lf	39.25 /mh	1,052	5.00 /lf	1,474		/lf			2,526	2,999
	EQ Equipment Room Base Slab 16S01		42.00 cy		19,932		21,452				1,573	42,957	51,926
	0302- EQ Equipment Room Stoop Slab 16S01												
	4500 psi Concrete	3310.100	3.00 cy	/cy		210.00 /cy	674		/cy			674	674
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	3.00 cy	39.25 /mh	252	/cy			/cy		112	364	478
	Formwork S.O.G. Edge Form < 1'	3100.120	32.00 sf	39.25 /mh	377	2.00 /sf	67		/sf			444	614
	Finegrade Below Concrete	3150.650	60.00 sf	39.25 /mh	33	/sf			/sf			33	48
	Finish- Hard Trowel	3350.110	60.00 sf	39.25 /mh	33	0.01 /sf	1		/sf			34	48
	Liquid Curing Compounds	3390.170	60.00 sf	39.25 /mh	5	0.08 /sf	5		/sf			9	11
	Crushed Rock Below Concrete	2305.300	8.00 bcy	39.25 /mh	314	38.00 /ton	568		/cy			882	1,024
	Expansion Joint	3150.720	12.00 sf	39.25 /mh	47	3.00 /sf	38		/sf			85	106
	Expansion Joint Sealant	3150.720	12.00 lf	39.25 /mh	47	2.40 /lf	30		/lf			77	99
	Oil SOG Form	3100.310	32.00 sf	39.25 /mh	3	0.06 /sf	2		/sf			5	6
	Nails and Hardware	3150.200	32.00 sf	/sf		0.04 /sf	1		/sf			1	1
	Dimension Lumber	3150.200	32.00 sf	/sf		0.45 /sf	14		/sf			14	14
	Drill and Epoxy #5	3210.101	10.00 ea	39.25 /mh	118	5.00 /ea	53		/ea			170	223
	EQ Equipment Room Stoop Slab 16S01		3.00 cy		1,228		1,453				112	2,793	3,346
	0302-B 4" Concrete topping EQ Equip room 16S03												
	4500 psi Concrete	3310.100	6.00 cy	/cy		210.00 /cy	1,348		/cy			1,348	1,348
	Pump Place Slab on Grade	3310.230	6.00 cy	39.25 /mh	504	/cy			/cy		225	729	955
	Formwork S.O.G. Edge Form < 1'	3100.120	48.00 sf	39.25 /mh	471	2.00 /sf	101		/sf			572	784
	Finish- Hard Trowel	3350.110	418.00 sf	39.25 /mh	230	0.01 /sf	4		/sf			234	337
	Liquid Curing Compounds	3390.170	418.00 sf	39.25 /mh	33	0.08 /sf	31		/sf			64	79
	Blockouts in Concrete	3150.194	48.00 sf	39.25 /mh	659	2.00 /sf	96		/sf			755	1,052
	Oil SOG Form	3100.310	27.06 sf	39.25 /mh	2	0.06 /sf	2		/sf			4	5
	Nails and Hardware	3150.200	27.06 sf	/sf		0.04 /sf	1		/sf			1	1
	Dimension Lumber	3150.200	27.06 sf	/sf		0.45 /sf	12		/sf			12	12
	SOG Rebar	3210.104	0.64 tn	39.25 /mh	752	1,600.00 /tn	1,074		/tn			1,826	2,165
	Tar Paper Joints at precast	3150.630	200.00 sf	39.25 /mh	393	1.00 /sf	220		/sf			613	789

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302-B 4" Concrete topping EQ Equip room 16S03												
	Foam back precast blockouts roof	7240.100	42.00 sf	/sf		25.00 /sf	1,050		/sf			1,050	1,050
	4" Concrete topping EQ Equip room 16S03		5.11 cy		3,044		3,939				225	7,208	8,577
	0310- Equipment Pad Concrete EQ Equip Room 16S01												
	Equipment Pad Form 6"	3100.164	21.00 sf	39.25 /mh	165	2.00 /sf	44		/sf			209	283
	Oil Equipment Pad Form	3100.310	21.00 sf	39.25 /mh	165	0.06 /sf	1		/sf			166	240
	4500 psi Concrete	3310.100	2.00 cy	/cy		210.00 /cy	449		/cy			449	449
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Buggy Place Equipment Pads	3310.300	1.00 cy	39.25 /mh	168	/cy			/cy			168	244
	Liquid Curing Compounds	3390.170	54.00 sf	39.25 /mh	4	0.08 /sf	4		/sf			8	10
	Finish- Hard Trowel	3350.110	54.00 sf	39.25 /mh	30	0.01 /sf	1		/sf			30	44
	Chamfer	3150.625	24.00 lf	39.25 /mh	47	0.25 /lf	6		/lf			53	75
	Misc. Pad Rebar	3210.104	0.13 tn	39.25 /mh	147	1,600.00 /tn	210		/tn			357	423
	Nails and Hardware	3150.200	21.00 sf	/sf		0.04 /sf	1		/sf			1	1
	Drill and Epoxy #5	3210.101	46.00 ea	39.25 /mh	361	5.00 /ea	242		/ea			603	765
	Epoxy Bonding Agent	3150.200	54.00 sf	39.25 /mh	212	2.00 /sf	108		/sf			320	415
	CJ Prep Slab (rough 1/4" amp)	3350.170	54.00 sf	39.25 /mh	212	0.50 /sf	27		/sf			239	334
	Equipment Pad Concrete EQ Equip Room 16S01		2.00 cy		1,511		1,093					2,604	3,283
	CON Concrete				25,715		27,937				1,910	55,561	67,133
	16 - EQEQUIP EQ Equipment Room				25,715		27,937				1,910	55,561	67,133
	20 - PC 4 Primary Clarifier 4												
	CON Concrete												
	0247-1 Drilled Caissons Primary Clarifier #4												
	Sub - Caisson	2475.500	2,107.00 vf	/vf		25.25 /vf	53,202	0	/vf			53,202	53,202
	Moltz Labor For Caisson include clean up	2475.500	240.00 mnhr	39.25 /mh	9,420	/ls			/ls			9,420	13,659
	4500 psi Concrete	3310.100	172.38 cy	/cy		210.00 /cy	45,249		/cy			45,249	45,249
	Pump Place Tremie Conc	3310.310	172.38 cy	39.25 /mh	6,343	/cy			/cy		24,779	31,122	33,976
	Drop Rebar Cage in Caisson	2475.300	49.00 ea	39.25 /mh	7,693	/ea			/ea			7,693	11,155
	Finish- Hard Trowel	3350.110	86.59 sf	39.25 /mh	48	0.01 /sf	1		/sf			48	70
	Liquid Curing Compounds	3390.170	86.59 sf	39.25 /mh	7	0.08 /sf	6		/sf			13	16
	Formwork Sonotube 18"	3100.112	196.00 lf	39.25 /mh	2,539	8.00 /lf	1,646		/lf			4,185	5,328
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	1.00 mnth	8,800.00 /mnth	8,800	550.00 /mnth	550		17,500.00 /mnth	17,500	3,750	30,600	34,560
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	1.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	4,500	1,500	6,000	6,000
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	3.00 Mnth	/Mnth		/Mnth			5,510.00 /Mnth	16,530	6,000	22,530	22,530
	Rebar Chairs special for Caisson	3200.980	1,372.00 ea	/ea		5.00 /ea	6,860		/ea			6,860	6,860
	Safety tie off special	1116.100	1.00 ls	/ls		5,000.00 /ls	5,000		/ls			5,000	5,000
	Survey Caissons per lisencc surveyor (sub)	1630.100	1.00 ls	39.25 /mh		0.00 /ls	0	5,400	/ls			5,400	5,400
	Clean Up After Caissons	3150.650	8,011.00 sf	39.25 /mh	4,402	/sf			/sf			4,402	6,383
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	Spoils to Waste	2333.060	225.00 cy	39.25 /mh	883	/cy			/cy			883	1,281
	Drilled Caissons Primary Clarifier #4		2,107.00 ft		40,134		112,514	5,400		49,530	41,029	248,608	266,668
	0302- Primary Clarifier Center Column 20S01												
	4500 psi Concrete	3310.100	37.59 cy	/cy		210.00 /cy	8,447		/cy			8,447	8,447
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	37.59 cy	39.25 /mh	3,158	/cy			/cy		1,408	4,566	5,986
	Formwork S.O.G. Edge Form > 1'	3100.120	402.00 sf	39.25 /mh	5,522	2.00 /sf	844		/sf			6,367	8,852
	Finegrade Below Concrete	3150.650	140.00 sf	39.25 /mh	77	/sf			/sf			77	112
	Finish- Hard Trowel	3350.110	140.00 sf	39.25 /mh	77	0.01 /sf	1		/sf			78	113
	Water Cure	3390.170	140.00 sf	39.25 /mh	55	0.08 /sf	11		/sf			66	91
	Blockouts in Concrete	3150.194	252.00 sf	39.25 /mh	3,462	2.00 /sf	504		/sf			3,966	5,524
	Waterstop 6" Flat	3510.610	144.00 lf	39.25 /mh	565	8.00 /lf	1,210		/lf			1,775	2,029
	Oil SOG Form	3100.310	348.00 sf	39.25 /mh	27	0.06 /sf	22		/sf			50	62
	Nails and Hardware	3150.200	348.00 sf	/sf		0.04 /sf	14		/sf			14	14
	Dimension Lumber	3150.200	348.00 sf	/sf		0.45 /sf	157		/sf			157	157
	Slab Void - 12" with plastic and masonite	3100.320	140.00 sf	39.25 /mh	659	8.00 /sf	1,232		/sf			1,891	2,188
	Form Ties Specialty	3150.632	70.00 ea	39.25 /mh	550	5.00 /ea	350		/ea			900	1,147
	Non Shrink Grout rub sludge hopper	3150.700	4.00 cf	39.25 /mh	314	115.00 /cf	460		/cf			774	915
	Rebar Formsavers # 7	3210.108	128.00 ea	39.25 /mh	2,512	65.00 /ea	8,320		/ea			10,832	11,962
	Void form retainer	3100.320	48.00 lf	39.25 /mh	188	5.00 /lf	264		/lf			452	537
	Waterstop Fitting	3510.610	4.00 ea	39.25 /mh	157	85.00 /ea	340		/ea			497	568
	Epoxy Bonding Agent and grind back patch tie hole	3150.200	140.00 ea	39.25 /mh	550	1.00 /ea	140		/ea			690	937
	Clean Rock	2305.050	30.00 bcy	/cy		38.00 /ton	1,847		/cy			1,847	1,847
	Primary Clarifier Center Column 20S01		37.59 cy		17,873		24,163				1,408	43,444	51,487
	0302-B Outlet Box Fill Concrete Primary Clarifier #4 20S04												
	4500 psi Concrete	3310.100	12.00 cy	/cy		210.00 /cy	2,696		/cy			2,696	2,696
	Pump Place Slab on Grade	3310.230	12.00 cy	39.25 /mh	1,512	/cy			/cy		449	1,961	2,642
	Finish- Hard Trowel	3350.110	75.00 sf	39.25 /mh	41	0.01 /sf	1		/sf			42	61
	Water Cure	3390.170	75.00 sf	39.25 /mh	29	0.08 /sf	6		/sf			35	49
	Oil SOG Form	3100.310	120.00 sf	39.25 /mh	9	0.06 /sf	8		/sf			17	21
	Nails and Hardware	3150.200	120.00 sf	/sf		0.04 /sf	5		/sf			5	5
	Dimension Lumber	3150.200	120.00 sf	/sf		0.45 /sf	54		/sf			54	54

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302-B Outlet Box Fill Concrete Primary Clarifier #4 20S04												
	CJ Prep Slab	3350.170	200.00 sf	39.25 /mh	196	0.15 /sf	30		/sf			226	315
	2X4 along wall for platform for finishing	3150.620	50.00 lf	39.25 /mh	393	2.00 /lf	105		/lf			498	674
	Outlet Box Fill Concrete Primary Clarifier #4 20S04		8.33 cy		2,181		2,905				449	5,535	6,516
	0303- Concrete Walls Primary Clarifier #4 outlet box												
	Pump Place Walls	3310.260	20.83 cy	39.25 /mh	1,312	/cy			/cy		892	2,204	2,795
	4500 psi Concrete	3310.100	20.83 cy	/cy		210.00 /cy	4,681		/cy			4,681	4,681
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 12-16'	3100.180	750.00 sf	39.25 /mh	6,182	4.00 /sf	3,150		/sf			9,332	12,114
	CJ Prep Walls	3350.170	37.50 sf	39.25 /mh	37	0.15 /sf	6		/sf			42	59
	Finish- Top of Wall	3350.110	37.50 sf	39.25 /mh	21	0.01 /sf	0		/sf			21	30
	Liquid Curing Walls	3390.170	787.50 sf	39.25 /mh	31	0.08 /sf	59		/sf			90	104
	Grind/Patch Walls	3350.130	750.00 sf	39.25 /mh	353	0.05 /sf	38		/sf			391	550
	Waterstop Adeka or Swellstop	3510.610	45.00 lf	39.25 /mh	177	8.00 /lf	378		/lf			555	634
	CJ prep Walls	3150.620	45.00 lf	39.25 /mh	353	0.35 /lf	17		/lf			370	529
	Chamfer 3/4"	3150.625	125.00 lf	39.25 /mh	245	0.25 /lf	33		/lf			278	389
	Rub Walls	3350.140	500.00 sf	39.25 /mh	785	0.95 /sf	475		/sf			1,260	1,613
	Oil Wall Forms	3100.310	750.00 sf	39.25 /mh	59	0.06 /sf	48		/sf			107	133
	Nails and Hardware	3150.200	750.00 sf	/sf		0.04 /sf	30		/sf			30	30
	Form Ties 18"	3150.632	187.50 ea	/ea		2.00 /ea	375		/ea			375	375
	Dimension Lumber	3150.200	750.00 sf	/sf		0.45 /sf	338		/sf			338	338
	Rebar Templates	3200.980	25.00 lf	39.25 /mh	49	0.50 /lf	13		/lf			62	84
	Epoxy Bonding Agent Tie Hole	3150.200	374.00 ea	39.25 /mh	734	1.00 /ea	374		/ea			1,108	1,438
	Concrete Walls Primary Clarifier #4 outlet box		20.83 cy		10,338		10,013				892	21,243	25,895
	0304-A Suspended Radius Slab Concrete Primary Clarifier #4 20S01												
	4500 psi Concrete	3310.100	38.49 cy	/cy		210.00 /cy	8,648		/cy			8,648	8,648
	Slab Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Suspended Slab	3310.240	38.49 cy	39.25 /mh	3,233	/cy			/cy		1,647	4,880	6,334
	Shore Suspended Slab 0-15'	3100.124	1,920.00 sf	39.25 /mh	18,840	6.00 /sf	12,096		/sf			30,936	39,414
	Slab Edge Form > 1'	3100.124	285.89 sf	39.25 /mh	5,610	2.00 /sf	572		/sf			6,182	8,707
	Suspended Slab Const Joint	3100.124	24.00 sf	39.25 /mh	330	2.00 /sf	48		/sf			378	526
	CJ Prep Elevated Slab CJ	3350.170	320.00 sf	39.25 /mh	314	0.50 /sf	160		/sf			474	615
	Finish- Hard Trowel	3350.110	1,039.08 sf	39.25 /mh	571	0.01 /sf	10		/sf			581	838
	Water Cure	3390.170	1,039.08 sf	39.25 /mh	408	0.08 /sf	83		/sf			491	675
	Grind and Patch Deck Bottom	3350.130	1,039.08 sf	39.25 /mh	489	0.05 /sf	52		/sf			541	762
	Waterstop Adeka or Swellstop	3510.610	344.00 lf	39.25 /mh	1,350	8.00 /lf	2,890		/lf			4,240	4,847
	Chamfer 3/4"	3150.625	320.00 lf	39.25 /mh	628	0.25 /lf	84		/lf			712	995
	Oil Suspended Slab Frm	3100.310	1,324.97 sf	39.25 /mh	104	0.06 /sf	85		/sf			189	236
	Nails and Hardware	3150.200	1,039.08 sf	/sf		0.04 /sf	42		/sf			42	42
	Suspended Radius Slab Concrete Primary Clarifier #4 20S01		38.49 cy		31,877		24,769				1,647	58,293	72,638
	0308- Primary Clarifier Base Slab 20S03												
	4500 psi Concrete	3310.100	524.15 cy	/cy		210.00 /cy	117,776		/cy			117,776	117,776
	Slab Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	524.15 cy	39.25 /mh	22,013	/cy			/cy		19,629	41,642	51,548
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	914.00 sf	39.25 /mh	8,969	2.00 /sf	1,919		/sf			10,888	14,924
	Formwork S.O.G. Const Joints > 1'	3100.120	853.00 sf	39.25 /mh	15,401	2.00 /sf	1,791		/sf			17,192	24,123
	CJ Prep Slab	3350.170	553.00 sf	39.25 /mh	543	0.15 /sf	83		/sf			626	870
	Finegrade Below Concrete	3150.650	8,011.85 sf	39.25 /mh	4,403	/sf			/sf			4,403	6,384
	Finish- Hard Trowel	3350.110	8,011.85 sf	39.25 /mh	4,403	0.01 /sf	80		/sf			4,483	6,464
	Water Cure	3390.170	8,011.85 sf	39.25 /mh	3,145	0.08 /sf	641		/sf			3,786	5,201
	Waterstop 6" Flat	3510.610	626.00 lf	39.25 /mh	2,457	8.00 /lf	5,258		/lf			7,715	8,821
	Expansion Joint Sealant	3150.720	300.00 lf	39.25 /mh	1,178	2.40 /lf	756		/lf			1,934	2,463
	Oil SOG Form	3100.310	599.03 sf	39.25 /mh	47	0.06 /sf	38		/sf			85	107
	Nails and Hardware	3150.200	599.03 sf	/sf		0.04 /sf	24		/sf			24	24
	Dimension Lumber	3150.200	599.03 sf	/sf		0.45 /sf	270		/sf			270	270
	Void Retainer board	3100.320	330.00 lf	39.25 /mh	1,295	5.00 /lf	1,815		/lf			3,110	3,693
	Slab Void with plastic and masonite	3100.320	8,011.00 sf	39.25 /mh	18,866	8.00 /sf	70,497		/sf			89,363	97,852
	Raised Keyway at walls	3150.620	335.00 lf	39.25 /mh	6,574	10.00 /lf	3,518		/lf			10,092	13,050
	Waterstop Fitting	3510.610	24.00 ea	39.25 /mh	942	85.00 /ea	2,040		/ea			2,982	3,406
	Primary Clarifier Base Slab 20S03		524.15 cy		90,234		206,506				19,629	316,369	356,974
	0309- Circular Wall Concrete Primary Clarifier #4 lower wall 20S02												
	Pump Place Walls	3310.260	239.46 cy	39.25 /mh	10,057	/cy			/cy		10,249	20,306	24,831
	4500 psi Concrete	3310.100	239.46 cy	/cy		210.00 /cy	53,806		/cy			53,806	53,806
	Wall Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Radius Gang Forms 12-16'	3100.182	8,620.53 sf	39.25 /mh	55,829	6.00 /sf	54,309		/sf			110,138	135,261
	Wall Bulkhead Forms	3150.192	126.00 sf	39.25 /mh	2,275	2.00 /sf	265		/sf			2,540	3,563
	CJ Prep Walls	3350.170	587.81 sf	39.25 /mh	577	0.15 /sf	88		/sf			665	925
	Finish- Top of Wall	3350.110	461.81 sf	39.25 /mh	254	0.01 /sf	5		/sf			258	373
	Liquid Curing Walls	3390.170	9,082.34 sf	39.25 /mh	356	0.08 /sf	681		/sf			1,038	1,198
	Grind/Patch Walls	3350.130	8,620.53 sf	39.25 /mh	4,060	0.05 /sf	431		/sf			4,491	6,318
	Blockouts in Concrete	3150.194	64.00 sf	39.25 /mh	879	2.00 /sf	128		/sf			1,007	1,403
	Waterstop 6" Flat	3510.610	404.00 lf	39.25 /mh	1,586	8.00 /lf	3,394		/lf			4,979	5,693
	Roughen slab to trough joint	3150.620	320.00 sf	39.25 /mh	628	0.35 /sf	118		/sf			746	1,028
	Chamfer 3/4"	3150.625	500.00 lf	39.25 /mh	981	0.25 /lf	131		/lf			1,113	1,554
	Rub Walls	3350.140	3,200.00 sf	39.25 /mh	5,024	0.95 /sf	3,040		/sf			8,064	10,325
	Oil Wall Forms	3100.310	8,620.53 sf	39.25 /mh	677	0.06 /sf	552		/sf			1,228	1,533
	Nails and Hardware	3150.200	8,620.53 sf	/sf		0.04 /sf	345		/sf			345	345
	Form Ties 18"	3150.632	2,155.13 ea	/ea		2.00 /ea	4,310		/ea			4,310	4,310

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0309- Circular Wall Concrete Primary Clarifier #4 lower wall 20S02												
	Dimension Lumber	3150.200	8,620.53 sf	/sf		0.45 /sf	3,879		/sf			3,879	3,879
	Rebar Formsavers # 5	3210.108	1,280.00 ea	39.25 /mh	16,579	35.00 /ea	44,800		/ea			61,379	68,840
	Rebar Formsavers # 6	3210.108	96.00 ea	39.25 /mh	1,884	42.00 /ea	4,032		/ea			5,916	6,764
	Waterstop Adeka or Swellstop	3510.610	362.00 lf	39.25 /mh	1,421	8.00 /lf	3,041		/lf			4,462	5,101
	Waterstop Fitting	3510.610	6.00 ea	39.25 /mh	236	85.00 /ea	510		/ea			746	851
	Epoxy Bonding Agent Tie hole	3150.200	4,310.00 ea	39.25 /mh	8,458	1.00 /ea	4,310		/ea			12,768	16,575
	Circular Wall Concrete Primary Clarifier #4 lower wall 20S02		239.46 cy		111,760		182,175				10,249	304,184	354,476
	0309- Circular Wall Concrete Primary Clarifier #4 Upper Wall												
	Pump Place Walls	3310.260	42.76 cy	39.25 /mh	2,245	/cy			/cy		1,830	4,075	5,085
	4500 psi Concrete	3310.100	42.76 cy	/cy		210.00 /cy	9,608		/cy			9,608	9,608
	Wall Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Rented Form System 0-4'	3100.180	2,309.07 sf	39.25 /mh	19,033	2.00 /sf	4,849		/sf			23,882	32,446
	Wall Bulkhead Forms	3150.192	22.50 sf	39.25 /mh	406	2.00 /sf	47		/sf			453	636
	CJ Prep Walls	3350.170	330.38 sf	39.25 /mh	324	0.15 /sf	50		/sf			374	520
	Finish- Top of Wall	3350.110	307.88 sf	39.25 /mh	169	0.01 /sf	3		/sf			172	248
	Liquid Curing Walls	3390.170	2,616.95 sf	39.25 /mh	103	0.08 /sf	196		/sf			299	345
	Grind/Patch Walls	3350.130	2,309.07 sf	39.25 /mh	1,088	0.05 /sf	115		/sf			1,203	1,692
	Blockouts in Concrete	3150.194	24.00 sf	39.25 /mh	330	2.00 /sf	48		/sf			378	526
	Waterstop 6" Flat	3510.610	22.50 lf	39.25 /mh	88	8.00 /lf	189		/lf			277	317
	Chamfer 3/4"	3150.625	688.00 lf	39.25 /mh	1,350	0.25 /lf	181		/lf			1,531	2,138
	Rub Walls	3350.140	2,560.00 sf	39.25 /mh	4,019	0.95 /sf	2,432		/sf			6,451	8,260
	Oil Wall Forms	3100.310	2,309.07 sf	39.25 /mh	181	0.06 /sf	148		/sf			329	411
	Nails and Hardware	3150.200	2,309.07 sf	/sf		0.04 /sf	92		/sf			92	92
	Form Ties 12"	3150.632	577.27 ea	/ea		1.85 /ea	1,068		/ea			1,068	1,068
	Dimension Lumber	3150.200	2,309.07 sf	/sf		0.45 /sf	1,039		/sf			1,039	1,039
	Ledger Plate at bottom of form	3150.620	320.00 lf	39.25 /mh	2,512	2.00 /lf	672		/lf			3,184	4,314
	Boom Lift (L)	1900.300	2.00 Mnth	/Mnth		/Mnth		5,500.00 /Mnth		11,000	2,500	13,500	13,500
	Epoxy Bonding Agent tie hole	3150.200	1,154.00 ea	39.25 /mh	2,265	1.00 /ea	1,154		/ea			3,419	4,438
	Circular Wall Concrete Primary Clarifier #4 Upper Wall		42.76 cy		34,113		21,892			11,000	4,330	71,335	86,685
	0309- Circular Wall Concrete Clarifier #4 Trough Wall 20S04												
	Pump Place Walls	3310.260	32.81 cy	39.25 /mh	3,445	/cy			/cy		1,404	4,849	6,400
	4500 psi Concrete	3310.100	32.81 cy	/cy		210.00 /cy	7,373		/cy			7,373	7,373
	Wall Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Job Built with Plyform 0-4'	3100.180	1,771.86 sf	39.25 /mh	17,386	2.00 /sf	3,721		/sf			21,107	28,931
	Wall Bulkhead Forms	3150.192	18.00 sf	39.25 /mh	325	2.00 /sf	38		/sf			363	509
	CJ Prep Walls	3350.170	313.31 sf	39.25 /mh	307	0.15 /sf	47		/sf			354	493
	Finish- Top of Wall	3350.110	295.31 sf	39.25 /mh	162	0.01 /sf	3		/sf			165	238
	Liquid Curing Walls	3390.170	2,067.17 sf	39.25 /mh	81	0.08 /sf	155		/sf			236	273
	Grind/Patch Walls	3350.130	1,771.86 sf	39.25 /mh	835	0.05 /sf	89		/sf			923	1,299
	Waterstop Adeka or Swellstop	3510.610	338.00 lf	39.25 /mh	1,327	8.00 /lf	2,839		/lf			4,166	4,763
	Chamfer 4"	3150.625	320.00 lf	39.25 /mh	3,140	3.00 /lf	1,008		/lf			4,148	5,561
	Rub Walls	3350.140	1,920.00 sf	39.25 /mh	3,014	0.95 /sf	1,824		/sf			4,838	6,195
	Oil Wall Forms	3100.310	1,771.86 sf	39.25 /mh	139	0.06 /sf	113		/sf			252	315
	Nails and Hardware	3150.200	1,771.86 sf	/sf		0.04 /sf	71		/sf			71	71
	Form Ties 12"	3150.632	442.97 ea	/ea		1.85 /ea	819		/ea			819	819
	Dimension Lumber	3150.200	1,771.86 sf	/sf		0.45 /sf	797		/sf			797	797
	Epoxy Bonding Agent tie hole	3150.200	884.00 ea	39.25 /mh	1,735	1.00 /ea	884		/ea			2,619	3,400
	Circular Wall Concrete Clarifier #4 Trough Wall 20S04		32.81 cy		31,897		19,782				1,404	53,083	67,436
	0330 4- Primary Clarifier #4 Primary Influent and 12" Sludge Pipe Encase 20S01												
	Formwork Pipe Encasement	3100.108	1,050.00 sf	39.25 /mh	10,303	2.00 /sf	2,205		/sf			12,508	17,145
	Place Pipe Encasement	3310.195	68.00 cy	39.25 /mh	3,427	/cy			/cy			3,427	4,969
	4000 psi Concrete	3310.100	68.00 cy	/cy		210.00 /cy	15,280		/cy			15,280	15,280
	Nails and Hardware	3150.200	1,050.00 sf	/sf		0.04 /sf	42		/sf			42	42
	Form Ties Specialty	3150.632	225.00 ea	39.25 /mh	1,766	5.00 /ea	1,125		/ea			2,891	3,686
	Pipe Tie Down Large 36"	3150.200	8.00 ea	39.25 /mh	1,256	500.00 /ea	4,000		/ea			5,256	5,821
	Pipe Tie Downs medium 12"	3150.200	8.00 ea	39.25 /mh	1,256	250.00 /ea	2,000		/ea			3,256	3,821
	Dimension Lumber	3150.200	1,050.00 sf	/sf		0.45 /sf	473		/sf			473	473
	Oil SOG Form	3100.310	1,050.00 sf	39.25 /mh	82	0.06 /sf	67		/sf			150	187
	Finish- Rough	3350.110	412.00 sf	39.25 /mh	146	0.01 /sf	2		/sf			148	214
	Liquid Curing Compounds	3390.170	412.00 sf	39.25 /mh	32	0.08 /sf	31		/sf			63	78
	Slab Void 9' concrete with plastic and cover board	3100.320	412.00 sf	39.25 /mh	1,617	8.00 /sf	3,626		/sf			5,243	5,970
	Finegrade Below Concrete	3150.650	412.00 sf	39.25 /mh	226	/sf			/sf			226	328
	Mud mat under pipe encase	3310.200	12.00 cy	39.25 /mh	1,008	/cy			/cy			1,008	1,462
	Flow Fill around pipe and to bot of slab	3310.100	160.00 cy	39.25 /mh	6,280	180.00 /cy	30,240		/cy			36,520	39,346
	Clean Rock around pipe encase	2305.050	120.00 bcy	/cy		38.00 /ton	7,387		/cy			7,387	7,387
	Void retainer	3100.320	200.00 lf	39.25 /mh	785	5.00 /lf	1,100		/lf			1,885	2,238
	10 Mil. Vapor Barrier around encasement	3150.630	2,100.00 sf	39.25 /mh	1,649	0.50 /sf	1,155		/sf			2,804	3,545
	Formwork Rectangle Columns 0 - 8'	3100.110	336.00 sf	39.25 /mh	4,616	4.00 /sf	1,411		/sf			6,027	8,104
	Void Retainer board	3100.320	240.00 lf	39.25 /mh	942	5.00 /lf	1,320		/lf			2,262	2,686
	Bonding Agent tie holes cut pack 1" and patch	3150.200	450.00 ea	39.25 /mh	883	1.00 /ea	450		/ea			1,333	1,731
	Primary Clarifier #4 Primary Influent and 12" Sludge Pipe Encase 20S01		37.95 CY		36,275		71,914					108,188	124,512
	CON Concrete				406,681		676,632	5,400		60,530	81,038	1,230,281	1,413,288
	20 - PC 4 Primary Clarifier 4				406,681		676,632	5,400		60,530	81,038	1,230,281	1,413,288
	23 - WPS PS West Primary Sludge Pump Station												
	CON Concrete												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0247-1 Drilled Caissons West Sludge Pump Station 23S01												
	Sub - Caisson	2475.500	724.00 vf	/vf		25.25 /vf	18,281		/vf			18,281	18,281
	Moltz Support For Sub - Caisson	2475.500	120.00 mnhr	39.25 /mh	4,710	/ls			/ls			4,710	6,830
	4500 psi Concrete	3310.100	59.23 cy	/cy		210.00 /cy	15,548		/cy			15,548	15,548
	Pump Place Tremie Conc	3310.310	59.23 cy	39.25 /mh	2,906	/cy			/cy		8,515	11,421	12,728
	Drop Rebar Cage in Caisson	2475.300	16.00 ea	39.25 /mh	2,512	/ea			/ea			2,512	3,642
	Finish- Hard Trowel	3350.110	28.27 sf	39.25 /mh	16	0.01 /sf	0		/sf			16	23
	Liquid Curing Compounds	3390.170	28.27 sf	39.25 /mh	2	0.08 /sf	2		/sf			4	5
	Formwork Sonotube 18"	3100.112	64.00 lf	39.25 /mh	829	8.00 /lf	538		/lf			1,367	1,740
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	0.50 mnth	8,800.00 /mnth	4,400	550.00 /mnth	275		17,500.00 /mnth	8,750	1,875	15,300	17,280
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.50 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	2,250	750	3,000	3,000
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,000	2,900	2,900
	Rebar Chairs special for Caissons	3200.980	512.00 ea	/ea		5.00 /ea	2,560		/ea			2,560	2,560
	Survey & Layouts Lisenced Survey	1630.100	1.00 ls	39.25 /mh		0.00 /ls	0	3,500	/ls			3,500	3,500
	Safety Caisson Special Tie off	1116.100	1.00 ls	/ls		2,500.00 /ls	2,500		/ls			2,500	2,500
	Finegrade Below Concrete	3150.650	1,600.00 sf	39.25 /mh	1,256	/sf			/sf			1,256	1,821
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Drilled Caissons West Sludge Pump Station 23S01		724.00 ft		16,631		39,704	3,500		16,500	13,640	89,975	97,459
	0302- West Sludge Pump Sump Slab 23S02												
	4500 psi Concrete	3310.100	5.35 cy	/cy		210.00 /cy	1,203		/cy			1,203	1,203
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	5.35 cy	39.25 /mh	450	/cy			/cy		200	650	852
	Formwork S.O.G. Edge Form > 1'	3100.120	68.00 sf	39.25 /mh	934	2.00 /sf	143		/sf			1,077	1,497
	Finegrade Below Concrete	3150.650	72.25 sf	39.25 /mh	40	/sf			/sf			40	58
	Finish- Hard Trowel	3350.110	72.25 sf	39.25 /mh	40	0.01 /sf	1		/sf			40	58
	Water Cure	3390.170	72.25 sf	39.25 /mh	28	0.08 /sf	6		/sf			34	47
	Waterstop 6" Flat	3510.610	24.00 lf	39.25 /mh	94	8.00 /lf	202		/lf			296	338
	Keyway Raised at walls	3150.620	24.00 lf	39.25 /mh	188	10.00 /lf	252		/lf			440	525
	Oil SOG Form	3100.310	68.00 sf	39.25 /mh	5	0.06 /sf	4		/sf			10	12
	Nails and Hardware	3150.200	68.00 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	68.00 sf	/sf		0.45 /sf	31		/sf			31	31
	Slab Void with plastic and masonite	3100.320	73.00 sf	39.25 /mh	287	8.00 /sf	642		/sf			929	1,058
	Wall Void retainer	3100.320	32.00 lf	39.25 /mh	126	5.00 /lf	176		/lf			302	358
	West Sludge Pump Sump Slab 23S02		5.35 cy		2,192		2,662				200	5,054	6,040
	0302- Sludge Pump Station Base Slab 23S02												
	4500 psi Concrete	3310.100	118.58 cy	/cy		210.00 /cy	26,645		/cy			26,645	26,645
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	118.58 cy	39.25 /mh	5,976	/cy			/cy		4,441	10,417	13,106
	Formwork S.O.G. Edge Form > 1'	3100.120	326.68 sf	39.25 /mh	4,488	2.00 /sf	686		/sf			5,174	7,193
	Formwork S.O.G. Const Joints > 1'	3100.120	65.34 sf	39.25 /mh	1,180	2.00 /sf	137		/sf			1,317	1,848
	CJ Prep Slab	3350.170	65.34 sf	39.25 /mh	64	0.15 /sf	10		/sf			74	103
	Finegrade Below Concrete	3150.650	1,600.83 sf	39.25 /mh	880	/sf			/sf			880	1,276
	Finish- Hard Trowel	3350.110	1,600.83 sf	39.25 /mh	880	0.01 /sf	16		/sf			896	1,292
	Water Cure	3390.170	1,600.83 sf	39.25 /mh	628	0.08 /sf	128		/sf			756	1,039
	Blockouts in Concrete	3150.194	32.00 sf	39.25 /mh	440	2.00 /sf	64		/sf			504	701
	Waterstop 6" Flat	3510.610	196.67 lf	39.25 /mh	772	8.00 /lf	1,652		/lf			2,424	2,771
	Keyway Raised Wall Keyway	3150.620	164.00 lf	39.25 /mh	1,287	10.00 /lf	1,722		/lf			3,009	3,589
	Oil SOG Form	3100.310	392.02 sf	39.25 /mh	31	0.06 /sf	25		/sf			56	70
	Nails and Hardware	3150.200	326.68 sf	/sf		0.04 /sf	13		/sf			13	13
	Dimension Lumber	3150.200	326.68 sf	/sf		0.45 /sf	147		/sf			147	147
	Slab Void 12" with plastic and cover board	3100.320	1,601.00 sf	39.25 /mh	3,770	8.00 /sf	14,089		/sf			17,859	19,556
	Wall Void Slab retainer board	3100.320	164.00 lf	39.25 /mh	644	5.00 /lf	902		/lf			1,546	1,835
	Waterstop Fitting -	3510.610	8.00 ea	39.25 /mh	314	85.00 /ea	680		/ea			994	1,135
	Sludge Pump Station Base Slab 23S02		118.58 cy		21,353		46,916				4,441	72,710	82,319
	0302- West Sludge Pump Station Electric Room Slab 23S03												
	4500 psi Concrete	3310.100	18.37 cy	/cy		210.00 /cy	4,128		/cy			4,128	4,128
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	18.37 cy	39.25 /mh	1,543	/cy			/cy		688	2,231	2,925
	Formwork S.O.G. Edge Form < 1'	3100.120	94.00 sf	39.25 /mh	1,476	2.00 /sf	197		/sf			1,673	2,337
	Finegrade Below Concrete	3150.650	496.00 sf	39.25 /mh	273	/sf			/sf			273	395
	Finish- Hard Trowel	3350.110	496.00 sf	39.25 /mh	273	0.01 /sf	5		/sf			278	400
	Water Cure	3390.170	496.00 sf	39.25 /mh	195	0.08 /sf	40		/sf			234	322
	Blockouts in Concrete	3150.194	64.00 sf	39.25 /mh	879	2.00 /sf	128		/sf			1,007	1,403
	Waterstop Adeka or Swellstop	3510.610	30.00 lf	39.25 /mh	118	8.00 /lf	252		/lf			370	423
	Chamfer 3/4"	3150.625	30.00 lf	39.25 /mh	59	0.25 /lf	8		/lf			67	93
	6 Mil. Vapor Barrier	3150.630	496.00 sf	39.25 /mh	389	0.50 /sf	273		/sf			662	837
	Oil SOG Form	3100.310	94.00 sf	39.25 /mh	7	0.06 /sf	6		/sf			13	17
	Nails and Hardware	3150.200	94.00 sf	/sf		0.04 /sf	4		/sf			4	4
	Dimension Lumber	3150.200	94.00 sf	/sf		0.45 /sf	42		/sf			42	42
	Slab Void - 12" with plastic and cover board	3100.320	496.00 sf	39.25 /mh	1,168	8.00 /sf	4,365		/sf			5,533	6,059
	Non Shrink Grout at electrical penetrations	3150.700	16.00 cf	39.25 /mh	1,256	115.00 /cf	1,840		/cf			3,096	3,661
	West Sludge Pump Station Electric Room Slab 23S03		18.37 cy		7,635		11,287				688	19,611	23,046
	0302-B West Sludge Pump Station Roof Topping Concrete 23S04												
	4500 psi Concrete	3310.100	24.00 cy	/cy		210.00 /cy	5,393		/cy			5,393	5,393

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302-B West Sludge Pump Station Roof Topping Concrete 23S04												
	Pump Place Slab on Grade	3310.230	24.00 cy	39.25 /mh	2,016	/cy			/cy		899	2,915	3,822
	Formwork S.O.G. Edge Form < 1'	3100.120	69.60 sf	39.25 /mh	683	2.00 /sf	146		/sf			829	1,136
	Formwork S.O.G. Const Joints < 1'	3100.120	10.80 sf	39.25 /mh	195	2.00 /sf	23		/sf			218	305
	CJ Prep Slab	3350.170	10.80 sf	39.25 /mh	11	0.15 /sf	2		/sf			12	17
	Finish- Hard Trowel	3350.110	1,620.00 sf	39.25 /mh	890	0.01 /sf	16		/sf			906	1,307
	Liquid Curing Compounds	3390.170	1,620.00 sf	39.25 /mh	127	0.08 /sf	122		/sf			249	306
	Blockouts in Concrete	3150.194	120.00 sf	39.25 /mh	1,649	2.00 /sf	240		/sf			1,889	2,630
	Oil SOG Form	3100.310	80.40 sf	39.25 /mh	6	0.06 /sf	5		/sf			11	14
	Nails and Hardware	3150.200	69.60 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	69.60 sf	/sf		0.45 /sf	31		/sf			31	31
	CJ Prep Slab	3350.170	1,630.80 sf	39.25 /mh	1,600	0.15 /sf	245		/sf			1,845	2,565
	Epoxy Bonding Agent	3150.200	1,630.80 sf	39.25 /mh	1,920	2.00 /sf	3,262		/sf			5,182	6,046
	Tar Paper at Joints	3150.630	600.00 sf	39.25 /mh	1,178	1.00 /sf	660		/sf			1,838	2,367
	Foam Back blockouts	7240.100	42.00 sf	/sf		25.00 /sf	1,050		/sf			1,050	1,050
	West Sludge Pump Station Roof Topping Concrete 23S04		24.00 cy		10,275		11,196				899	22,370	26,993
	0303- Concrete Walls for Sump Sludge Pump 23S02												
	Pump Place Walls	3310.260	5.20 cy	39.25 /mh	436	/cy			/cy		222	659	855
	4500 psi Concrete	3310.100	5.20 cy	/cy		210.00 /cy	1,168		/cy			1,168	1,168
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Rented Form System 0-4'	3100.180	168.00 sf	39.25 /mh	1,649	2.00 /sf	353		/sf			2,001	2,743
	CJ Prep Walls	3350.170	46.76 sf	39.25 /mh	46	0.15 /sf	7		/sf			53	74
	Finish- Top of Wall	3350.110	46.76 sf	39.25 /mh	26	0.01 /sf	0		/sf			26	38
	Liquid Curing Walls	3390.170	214.76 sf	39.25 /mh	8	0.08 /sf	16		/sf			25	28
	Grind/Patch Walls	3350.130	168.00 sf	39.25 /mh	79	0.05 /sf	8		/sf			88	123
	Waterstop 6" Flat	3510.610	24.00 lf	39.25 /mh	94	8.00 /lf	202		/lf			296	338
	Rub Walls	3350.140	84.00 sf	39.25 /mh	132	0.95 /sf	80		/sf			212	271
	Oil Wall Forms	3100.310	168.00 sf	39.25 /mh	13	0.06 /sf	11		/sf			24	30
	Nails and Hardware	3150.200	168.00 sf	/sf		0.04 /sf	7		/sf			7	7
	Form Ties 20"	3150.632	42.00 ea	/ea		2.25 /ea	95		/ea			95	95
	Dimension Lumber	3150.200	168.00 sf	/sf		0.45 /sf	76		/sf			76	76
	Rebar Templates	3200.980	28.00 lf	39.25 /mh	55	0.50 /lf	14		/lf			69	94
	Epoxy Bonding Agent tie holes	3150.200	84.00 ea	39.25 /mh	165	1.00 /ea	84		/ea			249	323
	Concrete Walls for Sump Sludge Pump 23S02		5.20 cy		2,703		2,119				222	5,045	6,261
	0303- Concrete Walls Basement Sludge Pump Station 23S05												
	Pump Place Walls	3310.260	127.08 cy	39.25 /mh	5,337	/cy			/cy		5,439	10,776	13,177
	4500 psi Concrete	3310.100	127.08 cy	/cy		210.00 /cy	28,554		/cy			28,554	28,554
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 12-16'	3100.180	4,109.04 sf	39.25 /mh	29,030	4.00 /sf	17,258		/sf			46,288	59,352
	Wall Bulkhead Forms	3150.192	43.99 sf	39.25 /mh	794	2.00 /sf	92		/sf			887	1,244
	CJ Prep Walls	3350.170	304.51 sf	39.25 /mh	299	0.15 /sf	46		/sf			344	479
	Finish- Top of Wall	3350.110	260.52 sf	39.25 /mh	143	0.01 /sf	3		/sf			146	210
	Liquid Curing Walls	3390.170	4,369.56 sf	39.25 /mh	172	0.08 /sf	328		/sf			499	576
	Grind/Patch Walls	3350.130	4,109.04 sf	39.25 /mh	1,935	0.05 /sf	205		/sf			2,141	3,012
	Blockouts in Concrete	3150.194	64.00 sf	39.25 /mh	879	2.00 /sf	128		/sf			1,007	1,403
	Waterstop Adeka or Swellstop	3510.610	182.34 lf	39.25 /mh	716	8.00 /lf	1,532		/lf			2,247	2,569
	Chamfer 3/4"	3150.625	56.00 lf	39.25 /mh	110	0.25 /lf	15		/lf			125	174
	Rub Walls	3350.140	2,184.00 sf	39.25 /mh	3,429	0.95 /sf	2,075		/sf			5,504	7,047
	Oil Wall Forms	3100.310	4,109.04 sf	39.25 /mh	323	0.06 /sf	263		/sf			586	731
	Nails and Hardware	3150.200	4,109.04 sf	/sf		0.04 /sf	164		/sf			164	164
	Form Ties 20"	3150.632	1,027.26 ea	/ea		2.25 /ea	2,311		/ea			2,311	2,311
	Dimension Lumber	3150.200	4,109.04 sf	/sf		0.45 /sf	1,849		/sf			1,849	1,849
	Rebar Templates	3200.980	156.00 lf	39.25 /mh	306	0.50 /lf	78		/lf			384	522
	Waterstop 6" Flat	3510.610	28.00 lf	39.25 /mh	110	8.00 /lf	235		/lf			345	395
	Rebar Formsavers # 9	3210.108	24.00 ea	39.25 /mh	707	110.00 /ea	2,640		/ea			3,347	3,664
	Rebar Formsavers # 5	3210.108	24.00 ea	39.25 /mh	311	35.00 /ea	840		/ea			1,151	1,291
	Epoxy Bonding Agent tie hole	3150.200	2,054.00 ea	39.25 /mh	4,031	1.00 /ea	2,054		/ea			6,085	7,899
	Concrete Walls Basement Sludge Pump Station 23S05		127.08 cy		48,631		60,670				5,439	114,740	136,623
	0303- West Sludge Pump Station Electrical Room Grade Beam 23S03												
	Pump Place Walls	3310.260	19.67 cy	39.25 /mh	1,652	/cy			/cy		842	2,494	3,237
	4500 psi Concrete	3310.100	19.67 cy	/cy		210.00 /cy	4,419		/cy			4,419	4,419
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Job Built with Plyform 0-4'	3100.180	354.00 sf	39.25 /mh	3,474	2.00 /sf	743		/sf			4,217	5,780
	Wall Bulkhead Forms	3150.192	18.00 sf	39.25 /mh	325	2.00 /sf	38		/sf			363	509
	CJ Prep Walls	3350.170	195.00 sf	39.25 /mh	191	0.15 /sf	29		/sf			221	307
	Finish- Top of Wall	3350.110	177.00 sf	39.25 /mh	97	0.01 /sf	2		/sf			99	143
	Liquid Curing Walls	3390.170	531.00 sf	39.25 /mh	21	0.08 /sf	40		/sf			61	70
	Grind/Patch Walls	3350.130	354.00 sf	39.25 /mh	167	0.05 /sf	18		/sf			184	259
	Rub Walls	3350.140	118.00 sf	39.25 /mh	185	0.95 /sf	112		/sf			297	381
	Oil Wall Forms	3100.310	354.00 sf	39.25 /mh	28	0.06 /sf	23		/sf			50	63
	Nails and Hardware	3150.200	354.00 sf	/sf		0.04 /sf	14		/sf			14	14
	Form Ties 36"	3150.632	88.50 ea	/ea		5.00 /ea	443		/ea			443	443
	Dimension Lumber	3150.200	354.00 sf	/sf		0.45 /sf	159		/sf			159	159
	Rebar Templates	3200.980	59.00 lf	39.25 /mh	116	0.50 /lf	30		/lf			145	197
	Wall Void retainer board	3100.320	120.00 lf	39.25 /mh	471	5.00 /lf	660		/lf			1,131	1,343
	Slab Void - 12" with plastic and void	3100.320	177.00 sf	39.25 /mh	417	8.00 /sf	1,558		/sf			1,974	2,162
	Epoxy Bonding Agent tie holes	3150.200	176.00 ea	39.25 /mh	345	1.00 /ea	176		/ea			521	677

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	West Sludge Pump Station Electrical Room Grade Beam 23S03		19.67 cy		7,489		8,463				842	16,793	20,163
	0304- Suspended Slab Concrete Sludge Pump Station deck 23S03												
	4500 psi Concrete	3310.100	22.58 cy	/cy		210.00 /cy	5,075		/cy			5,075	5,075
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Suspended Slab	3310.240	22.58 cy	39.25 /mh	1,897	/cy			/cy		967	2,864	3,717
	Shore Suspended Slab 0-15'	3100.124	609.77 sf	39.25 /mh	8,377	6.00 /sf	3,842		/sf			12,218	15,988
	Slab Edge Form < 1'	3100.124	104.00 sf	39.25 /mh	2,041	2.00 /sf	218		/sf			2,259	3,178
	Finish- Hard Trowel	3350.110	609.77 sf	39.25 /mh	335	0.01 /sf	6		/sf			341	492
	Grind and Patch Deck Bottom	3350.130	609.77 sf	39.25 /mh	287	0.05 /sf	30		/sf			318	447
	Blockouts in Concrete	3150.194	24.00 sf	39.25 /mh	330	2.00 /sf	48		/sf			378	526
	Chamfer 3/4"	3150.625	93.00 lf	39.25 /mh	183	0.25 /lf	24		/lf			207	289
	Oil Suspended Slab Frm	3100.310	609.77 sf	39.25 /mh	48	0.06 /sf	39		/sf			87	108
	Nails and Hardware	3150.200	609.77 sf	/sf		0.04 /sf	24		/sf			24	24
	Rub Slab Bottom	3350.140	609.77 sf	39.25 /mh	718	0.95 /sf	579		/sf			1,297	1,620
	Beam Bottom Forms	3100.140	64.00 sf	39.25 /mh	879	6.00 /sf	403		/sf			1,282	1,678
	Beam Side Forms	3100.140	128.00 sf	39.25 /mh	1,758	2.00 /sf	269		/sf			2,027	2,818
	Suspended Slab Concrete Sludge Pump Station deck 23S03		22.58 cy		16,853		10,558				967	28,378	35,961
	0307- West Sludge Pump Station column lower level 23S02												
	4500 psi Concrete	3310.100	1.00 cy	/cy		210.00 /cy	225		/cy			225	225
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Piers & Columns	3310.270	1.00 cy	39.25 /mh	126	/cy			/cy		43	169	225
	Formwork Rectangle Columns 12 -16'	3100.110	74.48 sf	39.25 /mh	877	4.00 /sf	313		/sf			1,190	1,584
	Liquid Curing Compounds	3390.170	74.48 sf	39.25 /mh	6	0.08 /sf	6		/sf			11	14
	Grind/Patch Columns	3350.130	74.48 sf	39.25 /mh	44	0.05 /sf	4		/sf			47	67
	Chamfer 3/4"	3150.625	56.00 lf	39.25 /mh	110	0.25 /lf	15		/lf			125	174
	Oil Column Forms	3100.310	74.48 sf	39.25 /mh	6	0.06 /sf	5		/sf			11	13
	Rub Columns	3350.140	74.48 sf	39.25 /mh	88	0.95 /sf	71		/sf			158	198
	Dimension Lumber	3150.200	74.48 sf	/sf		0.45 /sf	34		/sf			34	34
	Nails and Hardware	3150.200	74.48 sf	/sf		0.04 /sf	3		/sf			3	3
	West Sludge Pump Station column lower level 23S02		0.92 cy		1,256		674				43	1,972	2,537
	0310- Equipment Pad Concrete West Sludge Pump Station Lower Level 23S02												
	Equipment Pad Form 6"	3100.164	81.50 sf	39.25 /mh	800	2.00 /sf	171		/sf			971	1,331
	Oil Equipment Pad Form	3100.310	81.50 sf	39.25 /mh	6	0.06 /sf	5		/sf			12	15
	4500 psi Concrete	3310.100	3.55 cy	/cy		210.00 /cy	798		/cy			798	798
	Other Placement Count	3310.360	8.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Buggy Place Equipment Pads	3310.300	3.55 cy	39.25 /mh	447	/cy			/cy			447	649
	Liquid Curing Compounds	3390.170	191.75 sf	39.25 /mh	15	0.08 /sf	14		/sf			29	36
	Finish- Hard Trowel	3350.110	191.75 sf	39.25 /mh	105	0.01 /sf	2		/sf			107	155
	Chamfer	3150.625	172.00 lf	39.25 /mh	338	0.25 /lf	45		/lf			383	535
	Misc. Pad Rebar	3210.104	0.44 tn	39.25 /mh	523	1,600.00 /tn	746		/tn			1,268	1,504
	Nails and Hardware	3150.200	81.50 sf	/sf		0.04 /sf	3		/sf			3	3
	Drill and Epoxy #5	3210.101	172.00 ea	39.25 /mh	1,350	5.00 /ea	903		/ea			2,253	2,861
	Epoxy Bonding Agent	3150.200	192.00 sf	39.25 /mh	377	2.00 /sf	384		/sf			761	930
	CJ Prep Slab for equipment pads	3350.170	192.00 sf	39.25 /mh	377	0.50 /sf	96		/sf			473	642
	Equipment Pad Concrete West Sludge Pump Station Lower Level 23S02		3.55 cy		4,338		3,168					7,506	9,458
	0310- Equipment Pad Concrete West Sludge Pump Station main level 23S03												
	Equipment Pad Form 6"	3100.164	66.00 sf	39.25 /mh	648	2.00 /sf	139		/sf			786	1,078
	Oil Equipment Pad Form	3100.310	66.00 sf	39.25 /mh	5	0.06 /sf	4		/sf			9	12
	4500 psi Concrete	3310.100	2.98 cy	/cy		210.00 /cy	670		/cy			670	670
	Other Placement Count	3310.360	5.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Buggy Place Equipment Pads	3310.300	2.98 cy	39.25 /mh	376	/cy			/cy			376	545
	Liquid Curing Compounds	3390.170	161.00 sf	39.25 /mh	13	0.08 /sf	12		/sf			25	30
	Finish- Hard Trowel	3350.110	161.00 sf	39.25 /mh	88	0.01 /sf	2		/sf			90	130
	Chamfer	3150.625	97.00 lf	39.25 /mh	190	0.25 /lf	25		/lf			216	301
	Misc. Pad Rebar	3210.104	0.37 tn	39.25 /mh	440	1,600.00 /tn	629		/tn			1,069	1,267
	Nails and Hardware	3150.200	66.00 sf	/sf		0.04 /sf	3		/sf			3	3
	Drill and Epoxy #4	3210.101	132.00 ea	39.25 /mh	1,036	4.00 /ea	554		/ea			1,591	2,057
	Epoxy Bonding Agent	3150.200	161.00 sf	39.25 /mh	316	2.00 /sf	322		/sf			638	780
	CJ Prep 1/4" amplitude	3350.170	161.00 sf	39.25 /mh	316	0.50 /sf	81		/sf			396	539
	Equipment Pad Concrete West Sludge Pump Station main level 23S03		2.98 cy		3,428		2,440					5,869	7,411
	CON Concrete				142,783		199,858	3,500		16,500	27,380	390,021	454,274
	23 - WPS PS West Primary Sludge Pump Station				142,783		199,858	3,500		16,500	27,380	390,021	454,274
	24 - EQPS EQ Pump Station												
	CON Concrete												
	0302- Base slab at EQ Pump Station Lower Level 24S06												
	4500 psi Concrete	3310.100	31.67 cy	/cy		210.00 /cy	7,116		/cy			7,116	7,116
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	31.67 cy	39.25 /mh	2,660	/cy			/cy		1,186	3,846	5,043
	Finish- Hard Trowel	3350.110	570.00 sf	39.25 /mh	313	0.01 /sf	6		/sf			319	460
	Water Cure	3390.170	570.00 sf	39.25 /mh	224	0.08 /sf	46		/sf			269	370
	Waterstop Adeka or Swellstop	3510.610	98.00 lf	39.25 /mh	385	8.00 /lf	823		/lf			1,208	1,381
	Oil SOG Form	3100.310	147.00 sf	39.25 /mh	12	0.06 /sf	9		/sf			21	26
	Nails and Hardware	3150.200	147.00 sf	/sf		0.04 /sf	6		/sf			6	6
	Dimension Lumber	3150.200	147.00 sf	/sf		0.45 /sf	66		/sf			66	66
	Drill and Epoxy #5	3210.101	175.00 ea	39.25 /mh	2,061	5.00 /ea	919		/ea			2,979	3,907
	Epoxy Bonding Agent	3150.200	717.00 sf	39.25 /mh	1,407	2.00 /sf	1,434		/sf			2,841	3,474

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Base slab at EQ Pump Station Lower Level 24S06		31.67 cy		7,061		10,424				1,186	18,671	21,848
	0302- EQ Pump Station Pump Level Base Slab at 25 24S06												
	4500 psi Concrete	3310.100	31.11 cy	/cy		210.00 /cy	7,513		/cy			7,513	7,513
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	31.11 cy	39.25 /mh	2,809	/cy			/cy		1,252	4,061	5,325
	Finegrade Below Concrete	3150.650	840.00 sf	39.25 /mh	462	/sf			/sf			462	669
	Finish- Hard Trowel	3350.110	840.00 sf	39.25 /mh	462	0.01 /sf	8		/sf			470	678
	Water Cure	3390.170	840.00 sf	39.25 /mh	330	0.08 /sf	67		/sf			397	545
	Blockouts in Concrete	3150.194	48.00 sf	39.25 /mh	659	2.00 /sf	96		/sf			755	1,052
	Waterstop Adeka or Swellstop	3510.610	116.00 lf	39.25 /mh	455	8.00 /lf	974		/lf			1,430	1,635
	Oil SOG Form	3100.310	116.00 sf	39.25 /mh	9	0.06 /sf	7		/sf			17	21
	Nails and Hardware	3150.200	116.00 sf	/sf		0.04 /sf	5		/sf			5	5
	Dimension Lumber	3150.200	116.00 sf	/sf		0.45 /sf	52		/sf			52	52
	Geo Foam	3100.320	6,804.00 cf	39.25 /mh	10,682	12.00 /cf	93,895		/cf			104,577	109,385
	Rebar Formsavers # 6	3210.108	60.00 ea	39.25 /mh	1,178	42.00 /ea	2,520		/ea			3,698	4,227
	Import Structural Fill	2305.250	80.00 bcy	/cy		25.00 /ton	3,300		/cy			3,300	3,300
	EQ Pump Station Pump Level Base Slab at 25 24S06		31.11 cy		17,045		108,439				1,252	126,736	134,406
	0302- EQ Pump Station Pump Room Sump slab and walls 24S06												
	4500 psi Concrete	3310.100	2.37 cy	/cy		210.00 /cy	533		/cy			533	533
	Pump Place Slab on Grade	3310.230	2.37 cy	39.25 /mh	597	/cy			/cy		89	686	955
	Formwork S.O.G. Edge Form > 1'	3100.120	64.00 sf	39.25 /mh	2,010	2.00 /sf	134		/sf			2,144	3,048
	Finegrade Below Concrete	3150.650	16.00 sf	39.25 /mh	9	/sf			/sf			9	13
	Finish- Hard Trowel	3350.110	16.00 sf	39.25 /mh	9	0.01 /sf	0		/sf			9	13
	Liquid Curing Compounds	3390.170	16.00 sf	39.25 /mh	1	0.08 /sf	1		/sf			2	3
	Blockouts in Concrete	3150.194	24.00 sf	39.25 /mh	330	2.00 /sf	48		/sf			378	526
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	39.25 /mh	63	8.00 /lf	134		/lf			197	225
	Oil SOG Form	3100.310	64.00 sf	39.25 /mh	5	0.06 /sf	4		/sf			9	11
	Nails and Hardware	3150.200	64.00 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	64.00 sf	/sf		0.45 /sf	29		/sf			29	29
	EQ Pump Station Pump Room Sump slab and walls 24S06		2.37 cy		3,023		886				89	3,998	5,359
	0302- EQ PumP Station Door Stoop 24S03												
	4500 psi Concrete	3310.100	2.00 cy	/cy		210.00 /cy	449		/cy			449	449
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	2.00 cy	39.25 /mh	336	/cy			/cy		75	411	562
	Formwork S.O.G. Edge Form < 1'	3100.120	28.00 sf	39.25 /mh	385	2.00 /sf	59		/sf			443	617
	Finegrade Below Concrete	3150.650	40.00 sf	39.25 /mh	22	/sf			/sf			22	32
	Finish- Hard Trowel	3350.110	40.00 sf	39.25 /mh	22	0.01 /sf	0		/sf			22	32
	Liquid Curing Compounds	3390.170	40.00 sf	39.25 /mh	3	0.08 /sf	3		/sf			6	8
	Road Base Below Concrete	2305.300	1.48 bcy	39.25 /mh	23	25.00 /ton	73		/cy			96	106
	Oil SOG Form	3100.310	28.00 sf	39.25 /mh	2	0.06 /sf	2		/sf			4	5
	Nails and Hardware	3150.200	28.00 sf	/sf		0.04 /sf	1		/sf			1	1
	Dimension Lumber	3150.200	28.00 sf	/sf		0.45 /sf	13		/sf			13	13
	Drill and Epoxy #5	3210.101	10.00 ea	39.25 /mh	118	5.00 /ea	53		/ea			170	223
	EQ PumP Station Door Stoop 24S03		1.48 cy		911		653				75	1,638	2,048
	0303- Concrete Walls Lower Level thick walls 24S02												
	Pump Place Walls	3310.260	65.63 cy	39.25 /mh	3,307	/cy			/cy		2,809	6,116	7,604
	4500 psi Concrete	3310.100	65.63 cy	/cy		210.00 /cy	14,746		/cy			14,746	14,746
	Gang Form System 4-8' one sided	3100.180	196.00 sf	39.25 /mh	4,231	6.00 /sf	1,235		/sf			5,466	7,370
	Gang Form System 12-16' one sided	3100.180	280.00 sf	39.25 /mh	6,045	6.00 /sf	1,764		/sf			7,809	10,529
	Gang Form System 16'->	3100.180	1,170.00 sf	39.25 /mh	9,185	4.00 /sf	4,914		/sf			14,099	18,232
	Wall Bulkhead Forms	3150.192	123.58 sf	39.25 /mh	2,231	2.00 /sf	260		/sf			2,491	3,495
	CJ Prep Walls	3350.170	253.84 sf	39.25 /mh	249	0.15 /sf	38		/sf			287	399
	Finish- Top of Wall	3350.110	130.26 sf	39.25 /mh	72	0.01 /sf	1		/sf			73	105
	Liquid Curing Walls	3390.170	2,252.26 sf	39.25 /mh	88	0.08 /sf	169		/sf			257	297
	Grind/Patch Walls	3350.130	2,122.00 sf	39.25 /mh	999	0.05 /sf	106		/sf			1,106	1,555
	Waterstop Adeka or Swellstop	3510.610	204.00 lf	39.25 /mh	801	8.00 /lf	1,714		/lf			2,514	2,875
	Chamfer 3/4"	3150.625	156.00 lf	39.25 /mh	306	0.25 /lf	41		/lf			347	485
	Rub Walls	3350.140	850.00 sf	39.25 /mh	1,335	0.95 /sf	808		/sf			2,142	2,743
	Oil Wall Forms	3100.310	2,122.00 sf	39.25 /mh	167	0.06 /sf	136		/sf			302	377
	Nails and Hardware	3150.200	2,122.00 sf	/sf		0.04 /sf	85		/sf			85	85
	Form Ties 20"	3150.632	530.50 ea	/ea		2.25 /ea	1,194		/ea			1,194	1,194
	Dimension Lumber	3150.200	2,122.00 sf	/sf		0.45 /sf	955		/sf			955	955
	Rebar Templates	3200.980	78.00 lf	39.25 /mh	153	0.50 /lf	39		/lf			192	261
	Drill and Epoxy #5	3210.101	275.00 ea	39.25 /mh	3,238	5.00 /ea	1,444		/ea			4,682	6,139
	Epoxy Bonding Agent	3150.200	650.00 sf	39.25 /mh	1,276	2.00 /sf	1,300		/sf			2,576	3,150
	Epoxy Bonding Agent tie hole	3150.200	1,060.00 ea	39.25 /mh	2,080	1.00 /ea	1,060		/ea			3,140	4,076
	Concrete Walls Lower Level thick walls 24S02		65.63 cy		35,762		32,007				2,809	70,578	86,671
	0303- Concrete Wall patches and plugs 4ea on page 24S02												
	Pump Place Walls	3310.260	8.00 cy	39.25 /mh	2,016	/cy			/cy		342	2,358	3,265
	4500 psi Concrete	3310.100	8.00 cy	/cy		210.00 /cy	1,798		/cy			1,798	1,798
	Job Built with Plyform 4-8' One Sided	3100.180	108.00 sf	39.25 /mh	3,179	4.00 /sf	454		/sf			3,633	5,064
	Job Built with Plyform 8-12'	3100.180	216.00 sf	39.25 /mh	4,239	4.00 /sf	907		/sf			5,146	7,054
	CJ Prep Walls	3350.170	27.00 sf	39.25 /mh	26	0.15 /sf	4		/sf			31	42
	Finish- Top of Wall	3350.110	27.00 sf	39.25 /mh	15	0.01 /sf	0		/sf			15	22
	Liquid Curing Walls	3390.170	459.00 sf	39.25 /mh	18	0.08 /sf	34		/sf			52	61
	Grind/Patch Walls	3350.130	432.00 sf	39.25 /mh	203	0.05 /sf	22		/sf			225	317
	Blockouts in Concrete	3150.194	36.00 sf	39.25 /mh	495	2.00 /sf	72		/sf			567	789

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0303- Concrete Wall patches and plugs 4ea on page 24S02												
	Waterstop Adeka or Swellstop	3510.610	64.00 lf	39.25 /mh	251	8.00 /lf	538		/lf			789	902
	Chamfer 3/4"	3150.625	64.00 lf	39.25 /mh	126	0.25 /lf	17		/lf			142	199
	Rub Walls	3350.140	216.00 sf	39.25 /mh	339	0.95 /sf	205		/sf			544	697
	Oil Wall Forms	3100.310	432.00 sf	39.25 /mh	34	0.06 /sf	28		/sf			62	77
	Nails and Hardware	3150.200	432.00 sf	/sf		0.04 /sf	17		/sf			17	17
	Form Ties 12"	3150.632	108.00 ea	/ea		1.85 /ea	200		/ea			200	200
	Dimension Lumber	3150.200	432.00 sf	/sf		0.45 /sf	194		/sf			194	194
	Rebar Templates	3200.980	27.00 lf	39.25 /mh	53	0.50 /lf	14		/lf			66	90
	Drill and Epoxy #4	3210.101	96.00 ea	39.25 /mh	1,319	4.00 /ea	403		/ea			1,722	2,315
	Epoxy Bonding Agent	3150.200	112.00 sf	39.25 /mh	220	2.00 /sf	224		/sf			444	543
	Cut & Patch Rebar at 4ea Patches 1" back with epoxy grout	1360.100	48.00 ea	39.25 /mh	471	20.00 /ea	960		/ea			1,431	1,643
	Grout Back electrical box	3150.700	4.00 cf	39.25 /mh	628	115.00 /cf	460		/cf			1,088	1,371
	Concrete Wall patches and plugs 4ea on page 24S02		8.00 cy		13,632		6,550				342	20,525	26,659
	0303- Grade Beam at East Side of slab 24S05												
	Pump Place Walls	3310.260	13.33 cy	39.25 /mh	1,400	/cy			/cy		571	1,970	2,600
	4500 psi Concrete	3310.100	13.33 cy	/cy		210.00 /cy	2,996		/cy			2,996	2,996
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Job Built with Plyform 0-4'	3100.180	180.00 sf	39.25 /mh	3,533	2.00 /sf	378		/sf			3,911	5,500
	CJ Prep Walls	3350.170	120.00 sf	39.25 /mh	118	0.15 /sf	18		/sf			136	189
	Finish- Top of Wall	3350.110	120.00 sf	39.25 /mh	66	0.01 /sf	1		/sf			67	97
	Liquid Curing Walls	3390.170	300.00 sf	39.25 /mh	12	0.08 /sf	23		/sf			34	40
	Grind/Patch Walls	3350.130	180.00 sf	39.25 /mh	85	0.05 /sf	9		/sf			94	132
	Oil Wall Forms	3100.310	180.00 sf	39.25 /mh	14	0.06 /sf	12		/sf			26	32
	Nails and Hardware	3150.200	180.00 sf	/sf		0.04 /sf	7		/sf			7	7
	Form Ties 36"	3150.632	45.00 ea	/ea		5.00 /ea	225		/ea			225	225
	Dimension Lumber	3150.200	180.00 sf	/sf		0.45 /sf	81		/sf			81	81
	Rebar Templates	3200.980	30.00 lf	39.25 /mh	59	0.50 /lf	15		/lf			74	100
	Drill and Epoxy #5	3210.101	30.00 ea	39.25 /mh	353	5.00 /ea	158		/ea			511	670
	Slab Void - 12" with plastic and cover board	3100.320	120.00 sf	39.25 /mh	283	8.00 /sf	1,056		/sf			1,339	1,466
	Slab Void Retainer board	3100.320	35.00 sf	39.25 /mh	137	5.00 /sf	193		/sf			330	392
	Finegrade Below Concrete	3150.650	120.00 sf	39.25 /mh	66	/sf			/sf			66	96
	Epoxy Bonding Agent tie hole	3150.200	90.00 ea	39.25 /mh	177	1.00 /ea	90		/ea			267	346
	Grade Beam at East Side of slab 24S05		13.33 cy		6,301		5,260				571	12,132	14,968
	0310- Equipment Pad Concrete Pump Pads 24S03												
	Equipment Pad Form > 8"	3100.164	106.40 sf	39.25 /mh	1,044	2.00 /sf	223		/sf			1,267	1,737
	Oil Equipment Pad Form	3100.310	106.40 sf	39.25 /mh	8	0.06 /sf	7		/sf			15	19
	4500 psi Concrete	3310.100	4.73 cy	/cy		210.00 /cy	1,063		/cy			1,063	1,063
	Other Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Buggy Place Equipment Pads	3310.300	4.73 cy	39.25 /mh	794	/cy			/cy			794	1,152
	Liquid Curing Compounds	3390.170	96.00 sf	39.25 /mh	8	0.08 /sf	7		/sf			15	18
	Finish- Hard Trowel	3350.110	96.00 sf	39.25 /mh	53	0.01 /sf	1		/sf			54	77
	Chamfer	3150.625	80.00 lf	39.25 /mh	157	0.25 /lf	21		/lf			178	249
	Misc. Pad Rebar	3210.104	0.59 tn	39.25 /mh	696	1,600.00 /tn	994		/tn			1,690	2,003
	Nails and Hardware	3150.200	106.40 sf	/sf		0.04 /sf	4		/sf			4	4
	Drill and Epoxy #5	3210.101	96.00 ea	39.25 /mh	942	5.00 /ea	504		/ea			1,446	1,870
	Epoxy Bonding Agent	3150.200	96.00 sf	39.25 /mh	188	2.00 /sf	192		/sf			380	465
	CJ Prep Slab Roughen Equipment Pad	3350.170	96.00 sf	39.25 /mh	188	0.50 /sf	48		/sf			236	321
	Equipment Pad Concrete Pump Pads 24S03		4.73 cy		4,079		3,064					7,143	8,978
	CON Concrete				87,814		167,283				6,324	261,421	300,937
	24 - EQPS EQ Pump Station				87,814		167,283				6,324	261,421	300,937
	25 - EQ EQ Basins												
	CON Concrete												
	0247-1 EQ Basin Caissons 25S02												
	Sub - Caisson	2475.500	6,307.00 vf	/vf		25.25 /vf	159,252	0	/vf			159,252	159,252
	Moltz Support For Sub - Caisson	2475.500	120.00 mnhr	39.25 /mh	4,710	0.00 /ls	0	0	0.00 /ls	0	0	4,710	6,830
	4500 psi Concrete	3310.100	917.26 cy	/cy		210.00 /cy	240,781		/cy			240,781	240,781
	Pump Place Tremie Conc	3310.310	917.26 cy	39.25 /mh	45,003	/cy			/cy		131,856	176,859	197,111
	Drop Rebar Cage in Caisson	2475.300	119.00 ea	39.25 /mh	18,683	/ea			/ea			18,683	27,090
	Finish- Hard Trowel	3350.110	373.85 sf	39.25 /mh	205	0.01 /sf	4		/sf			209	302
	Liquid Curing Compounds	3390.170	373.85 sf	39.25 /mh	29	0.08 /sf	28		/sf			57	71
	Rebar Chairs special for caisson	3200.980	6,048.00 ea	/ea		5.00 /ea	30,240		/ea			30,240	30,240
	Formwork Sonotube 24"	3100.112	476.00 lf	39.25 /mh	6,165	13.00 /lf	6,497		/lf			12,663	15,437
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	2.00 mnth	8,800.00 /mnth	17,600	550.00 /mnth	1,100		17,500.00 /mnth	35,000	7,500	61,200	69,120
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	9,000	3,000	12,000	12,000
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	7,600	4,000	11,600	11,600
	Safety specail tie off	1116.100	1.00 ls	/ls		5,000.00 /ls	5,000	0	/ls			5,000	5,000
	Survey Lisenced for Caisson EQ	1630.100	1.00 ls	39.25 /mh		1,000.00 /ls	1,000	11,720	/ls			12,720	12,720
	Clean up after Caisson	3150.650	19,332.00 sf	39.25 /mh	12,899	/sf			/sf			12,899	18,704
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	Spoils to Waste	2333.060	1,200.00 cy	39.25 /mh	4,710	/cy			/cy			4,710	6,830
	EQ Basin Caissons 25S02		6,307.00 ft		110,006		443,902	11,720		58,800	149,356	773,783	823,286
	0302- EQ Basin Sump Slab 25S04												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- EQ Basin Sump Slab 25S04												
	4500 psi Concrete with Xypex	3310.100	13.33 cy	/cy		505.00 /cy	7,204		/cy			7,204	7,204
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	13.33 cy	39.25 /mh	1,120	/cy			/cy		499	1,619	2,123
	Formwork S.O.G. Edge Form > 1'	3100.120	152.00 sf	39.25 /mh	2,088	2.00 /sf	319		/sf			2,407	3,347
	Finegrade Below Concrete	3150.650	180.00 sf	39.25 /mh	99	/sf			/sf			99	143
	Finish- Hard Trowel	3350.110	180.00 sf	39.25 /mh	99	0.01 /sf	2		/sf			101	145
	Water Cure	3390.170	180.00 sf	39.25 /mh	71	0.08 /sf	14		/sf			85	117
	Waterstop 6" Flat	3510.610	48.00 lf	39.25 /mh	188	8.00 /lf	403		/lf			592	676
	Keyway raised at walls	3150.620	48.00 lf	39.25 /mh	377	10.00 /lf	504		/lf			881	1,050
	Oil SOG Form	3100.310	152.00 sf	39.25 /mh	12	0.06 /sf	10		/sf			22	27
	Nails and Hardware	3150.200	152.00 sf	/sf		0.04 /sf	6		/sf			6	6
	Dimension Lumber	3150.200	152.00 sf	/sf		0.45 /sf	68		/sf			68	68
	Wall Void Retainer Board	3100.320	80.00 lf	39.25 /mh	314	5.00 /lf	440		/lf			754	895
	Slab Void - with plastic and coverboard	3100.320	180.00 sf	39.25 /mh	424	8.00 /sf	1,584		/sf			2,008	2,199
	EQ Basin Sump Slab 25S04		13.33 cy		4,791		10,555				499	15,846	18,002
	0302- EQ Basin Base Slab 25S02												
	4500 psi Concrete	3310.100	1,489.28 cy	/cy		225.00 /cy	358,544		/cy			358,544	358,544
	Slab Placement Count	3310.360	18.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	1,489.28 cy	39.25 /mh	75,055	/cy			/cy		55,774	130,829	164,604
	Formwork S.O.G. Edge Form > 1'	3100.120	1,193.92 sf	39.25 /mh	16,401	2.00 /sf	2,507		/sf			18,909	26,289
	Formwork S.O.G. Const Joints > 1'	3100.120	1,643.20 sf	39.25 /mh	29,668	2.00 /sf	3,451		/sf			33,119	46,469
	CJ Prep Slab	3350.170	1,643.20 sf	39.25 /mh	1,612	0.15 /sf	246		/sf			1,859	2,584
	Finegrade Below Concrete	3150.650	19,332.00 sf	39.25 /mh	10,623	/sf			/sf			10,623	15,403
	Finish- Hard Trowel	3350.110	19,332.00 sf	39.25 /mh	10,623	0.01 /sf	193		/sf			10,816	15,597
	Water Cure	3390.170	19,332.00 sf	39.25 /mh	7,588	0.08 /sf	1,547		/sf			9,134	12,549
	Blockouts in Concrete	3150.194	64.00 sf	39.25 /mh	879	2.00 /sf	128		/sf			1,007	1,403
	Waterstop 6" Flat	3510.610	1,540.00 lf	39.25 /mh	6,045	8.00 /lf	12,936		/lf			18,981	21,701
	Keyway raised key at walls	3150.620	682.00 lf	39.25 /mh	5,354	10.00 /lf	7,161		/lf			12,515	14,924
	Chamfer 3/4"	3150.625	64.00 lf	39.25 /mh	126	0.25 /lf	17		/lf			142	199
	Oil SOG Form	3100.310	2,837.12 sf	39.25 /mh	223	0.06 /sf	182		/sf			404	505
	Nails and Hardware	3150.200	1,193.92 sf	/sf		0.04 /sf	48		/sf			48	48
	Dimension Lumber	3150.200	1,193.92 sf	/sf		0.45 /sf	537		/sf			537	537
	Wall Void soil retainer board	3100.320	575.00 lf	39.25 /mh	2,257	5.00 /lf	3,163		/lf			5,419	6,435
	Slab Void - 12" with plastic and cover board	3100.320	19,332.00 sf	39.25 /mh	45,527	8.00 /sf	170,122		/sf			215,648	236,136
	Expansion Joint Neoprene at EQ Slab	3150.720	206.00 sf	39.25 /mh	2,668	25.00 /sf	5,408		/sf			8,076	9,276
	Smooth Dowels 1" with PVC sleeve	3210.106	110.00 ea	39.25 /mh	2,159	10.00 /ea	1,100		/ea			3,259	4,230
	Caulking 20 oz tube 1d x1w Expansion Joint	7920.300	110.00 lf	39.25 /mh	432	20.00 /tub	756		/lf			1,188	1,382
	Waterstop 9" Bulb	3510.610	110.00 lf	39.25 /mh	432	9.00 /lf	1,040		/lf			1,471	1,666
	Waterstop Fitting -	3510.610	60.00 ea	39.25 /mh	2,355	85.00 /ea	5,100		/ea			7,455	8,515
	EQ Basin Base Slab 25S02		1,489.28 cy		220,026		574,184				55,774	849,984	948,995
	0302- EQ Basin Ladder pads 25S02												
	4500 psi Concrete with Xypex	3310.100	2.37 cy	/cy		505.00 /cy	1,281		/cy			1,281	1,281
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	2.37 cy	39.25 /mh	199	/cy			/cy		89	288	377
	Formwork S.O.G. Edge Form > 1'	3100.120	64.00 sf	39.25 /mh	879	2.00 /sf	134		/sf			1,014	1,409
	Finegrade Below Concrete	3150.650	32.00 sf	39.25 /mh	18	/sf			/sf			18	25
	Finish- Hard Trowel	3350.110	32.00 sf	39.25 /mh	18	0.01 /sf	0		/sf			18	26
	Water Cure	3390.170	32.00 sf	39.25 /mh	13	0.08 /sf	3		/sf			15	21
	Chamfer 3/4"	3150.625	48.00 lf	39.25 /mh	94	0.25 /lf	13		/lf			107	149
	Oil SOG Form	3100.310	64.00 sf	39.25 /mh	5	0.06 /sf	4		/sf			9	11
	Nails and Hardware	3150.200	64.00 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	64.00 sf	/sf		0.45 /sf	29		/sf			29	29
	Drill and Epoxy #5	3210.101	40.00 ea	39.25 /mh	471	5.00 /ea	210		/ea			681	893
	Epoxy Bonding Agent	3150.200	32.00 sf	39.25 /mh	63	2.00 /sf	64		/sf			127	155
	CJ Prep Slab equip pad	3350.170	32.00 sf	39.25 /mh	63	0.50 /sf	16		/sf			79	107
	EQ Basin Ladder pads 25S02		2.37 cy		1,822		1,756				89	3,667	4,486
	0302- EQ Basin Hatch Curbs 25S03												
	4500 psi Concrete with Xypex	3310.100	2.96 cy	/cy		505.00 /cy	1,601		/cy			1,601	1,601
	Buggy Place Slab on Grade	3310.230	2.96 cy	39.25 /mh	498	/cy			/cy			498	722
	Formwork S.O.G. Edge Form < 1'	3100.120	168.00 sf	39.25 /mh	2,308	2.00 /sf	353		/sf			2,661	3,699
	Finegrade Below Concrete	3150.650	80.00 sf	39.25 /mh	44	/sf			/sf			44	64
	Finish- Hard Trowel	3350.110	80.00 sf	39.25 /mh	44	0.01 /sf	1		/sf			45	65
	Water Cure	3390.170	80.00 sf	39.25 /mh	31	0.08 /sf	6		/sf			38	52
	Chamfer 3/4"	3150.625	80.00 lf	39.25 /mh	157	0.25 /lf	21		/lf			178	249
	Oil SOG Form	3100.310	168.00 sf	39.25 /mh	13	0.06 /sf	11		/sf			24	30
	Nails and Hardware	3150.200	168.00 sf	/sf		0.04 /sf	7		/sf			7	7
	Dimension Lumber	3150.200	168.00 sf	/sf		0.45 /sf	76		/sf			76	76
	Drill and Epoxy #5	3210.101	80.00 ea	39.25 /mh	942	5.00 /ea	420		/ea			1,362	1,786
	EQ Basin Hatch Curbs 25S03		2.96 cy		4,037		2,495					6,532	8,349
	0302-B Concrete sump fill concrete 2 ea 25S05												
	4500 psi Concrete With Xypex	3310.100	4.63 cy	/cy		505.00 /cy	2,502		/cy			2,502	2,502
	Pump Place Slab on Grade	3310.230	4.63 cy	39.25 /mh	389	/cy			/cy		173	562	737
	Finish- Hard Trowel	3350.110	50.00 sf	39.25 /mh	27	0.01 /sf	1		/sf			28	40
	Water Cure	3390.170	50.00 sf	39.25 /mh	20	0.08 /sf	4		/sf			24	32
	Oil SOG Form	3100.310	100.00 sf	39.25 /mh	8	0.06 /sf	6		/sf			14	18
	Nails and Hardware	3150.200	100.00 sf	/sf		0.04 /sf	4		/sf			4	4

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302-B Concrete sump fill concrete 2 ea 25S05												
	Dimension Lumber	3150.200	100.00 sf	/sf		0.45 /sf	45		/sf			45	45
	CJ Prep Slab	3350.170	50.00 sf	39.25 /mh	49	0.15 /sf	8		/sf			57	79
	Concrete sump fill concrete 2 ea 25S05		4.63 cy		493		2,569				173	3,235	3,457
	0303- Concrete Walls Sump Walls 25S02 2ea												
	Pump Place Walls	3310.260	11.03 cy	39.25 /mh	927	/cy			/cy		472	1,399	1,816
	4500 psi Concrete With Xypex	3310.100	11.03 cy	/cy		505.00 /cy	5,962		/cy			5,962	5,962
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Job Built with Plyform 0-4'	3100.180	448.00 sf	39.25 /mh	4,396	2.00 /sf	941		/sf			5,337	7,315
	CJ Prep Walls	3350.170	74.48 sf	39.25 /mh	73	0.15 /sf	11		/sf			84	117
	Finish- Top of Wall	3350.110	74.48 sf	39.25 /mh	41	0.01 /sf	1		/sf			42	60
	Liquid Curing Walls	3390.170	522.48 sf	39.25 /mh	21	0.08 /sf	39		/sf			60	69
	Grind/Patch Walls	3350.130	448.00 sf	39.25 /mh	211	0.05 /sf	22		/sf			233	328
	Waterstop 6" Flat	3510.610	48.00 lf	39.25 /mh	188	8.00 /lf	403		/lf			592	676
	Rub Walls	3350.140	224.00 sf	39.25 /mh	352	0.95 /sf	213		/sf			564	723
	Oil Wall Forms	3100.310	448.00 sf	39.25 /mh	35	0.06 /sf	29		/sf			64	80
	Nails and Hardware	3150.200	448.00 sf	/sf		0.04 /sf	18		/sf			18	18
	Form Ties 16"	3150.632	112.00 ea	/ea		1.95 /ea	218		/ea			218	218
	Dimension Lumber	3150.200	448.00 sf	/sf		0.45 /sf	202		/sf			202	202
	Rebar Templates	3200.980	56.00 lf	39.25 /mh	110	0.50 /lf	28		/lf			138	187
	Concrete Walls Sump Walls 25S02 2ea		11.03 cy		6,353		8,087				472	14,913	17,772
	0303- EQ Basin Walls interior and exterior 25S03												
	Pump Place Walls	3310.260	678.33 cy	39.25 /mh	34,186	/cy			/cy		29,033	63,219	78,602
	4500 psi Concrete with Xypex	3310.100	678.33 cy	/cy		505.00 /cy	366,537		/cy			366,537	366,537
	Wall Placement Count	3310.360	16.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 16'->	3100.180	24,420.00 sf	39.25 /mh	153,358	4.00 /sf	102,564		/sf			255,922	324,933
	Wall Bulkhead Forms	3150.192	444.00 sf	39.25 /mh	8,016	2.00 /sf	932		/sf			8,949	12,556
	CJ Prep Walls	3350.170	1,434.00 sf	39.25 /mh	1,407	0.15 /sf	215		/sf			1,622	2,255
	Finish- Top of Wall	3350.110	990.00 sf	39.25 /mh	544	0.01 /sf	10		/sf			554	799
	Liquid Curing Walls	3390.170	25,410.00 sf	39.25 /mh	997	0.08 /sf	1,906		/sf			2,903	3,352
	Grind/Patch Walls	3350.130	24,420.00 sf	39.25 /mh	11,502	0.05 /sf	1,221		/sf			12,723	17,899
	Blockouts in Concrete	3150.194	312.00 sf	39.25 /mh	4,286	2.00 /sf	624		/sf			4,910	6,839
	Waterstop 6" Flat	3510.610	346.00 lf	39.25 /mh	1,358	8.00 /lf	2,906		/lf			4,264	4,876
	Chamfer 3/4"	3150.625	800.00 lf	39.25 /mh	1,570	0.25 /lf	210		/lf			1,780	2,487
	Rub Walls	3350.140	12,210.00 sf	39.25 /mh	19,170	0.95 /sf	11,600		/sf			30,769	39,396
	Oil Wall Forms	3100.310	24,420.00 sf	39.25 /mh	1,917	0.06 /sf	1,563		/sf			3,480	4,342
	Nails and Hardware	3150.200	24,420.00 sf	/sf		0.04 /sf	977		/sf			977	977
	Form Ties 18"	3150.632	6,105.00 ea	/ea		2.00 /ea	12,210		/ea			12,210	12,210
	Dimension Lumber	3150.200	24,420.00 sf	/sf		0.45 /sf	10,989		/sf			10,989	10,989
	Rebar Templates	3200.980	660.00 lf	39.25 /mh	1,295	0.50 /lf	330		/lf			1,625	2,208
	Expansion Joint Neoprene at EQ Walls	3150.720	80.00 sf	39.25 /mh	1,036	25.00 /sf	2,100		/sf			3,136	3,602
	Waterstop 9" Bulb at EJ	3510.610	40.00 lf	39.25 /mh	157	9.00 /lf	378		/lf			535	606
	Smooth Dowels 1"with PVC sleeve	3210.106	40.00 ea	39.25 /mh	785	10.00 /ea	400		/ea			1,185	1,538
	Epoxy bond agent tie holes	3150.200	12,210.00 ea	39.25 /mh	23,962	1.00 /ea	12,210		/ea			36,172	46,955
	Dovetail Slots	4080.150	8,481.00 lf	39.25 /mh	33,288	7.00 /lf	62,335		/lf			95,623	110,603
	Caulking 20 oz tube 1d x1w EJ at EQ	7920.300	80.00 lf	39.25 /mh	314	20.00 /tube	550		/lf			864	1,005
	EQ Basin Walls interior and exterior 25S03		678.33 cy		299,149		592,767				29,033	920,949	1,055,565
	0303- EQ Parapet Wall 25S04												
	Pump Place Walls	3310.260	62.98 cy	39.25 /mh	3,306	/cy			/cy		2,696	6,002	7,490
	4500 psi Concrete with Xypex	3310.100	62.98 cy	/cy		210.00 /cy	14,152		/cy			14,152	14,152
	Wall Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 4-8'	3100.180	5,076.00 sf	39.25 /mh	35,862	4.00 /sf	21,319		/sf			57,181	73,319
	Wall Bulkhead Forms	3150.192	48.24 sf	39.25 /mh	871	2.00 /sf	101		/sf			972	1,364
	CJ Prep Walls	3350.170	426.12 sf	39.25 /mh	418	0.15 /sf	64		/sf			482	670
	Finish- Top of Wall	3350.110	377.88 sf	39.25 /mh	208	0.01 /sf	4		/sf			211	305
	Liquid Curing Walls	3390.170	5,453.88 sf	39.25 /mh	214	0.08 /sf	409		/sf			623	719
	Grind/Patch Walls	3350.130	5,076.00 sf	39.25 /mh	2,391	0.05 /sf	254		/sf			2,645	3,720
	Chamfer 3/4"	3150.625	564.00 lf	39.25 /mh	1,107	0.25 /lf	148		/lf			1,255	1,753
	Rub Walls	3350.140	2,256.00 sf	39.25 /mh	3,542	0.95 /sf	2,143		/sf			5,685	7,279
	Oil Wall Forms	3100.310	5,076.00 sf	39.25 /mh	398	0.06 /sf	325		/sf			723	903
	Nails and Hardware	3150.200	5,076.00 sf	/sf		0.04 /sf	203		/sf			203	203
	Form Ties 8"	3150.632	1,269.00 ea	/ea		1.75 /ea	2,221		/ea			2,221	2,221
	Dimension Lumber	3150.200	5,076.00 sf	/sf		0.45 /sf	2,284		/sf			2,284	2,284
	Rebar Templates	3200.980	564.00 lf	39.25 /mh	1,107	0.50 /lf	282		/lf			1,389	1,887
	Dovetail Slots	3150.198	2,544.00 lf	39.25 /mh	9,985	7.00 /lf	18,698		/lf			28,684	33,177
	Epoxy Bonding Agent tie holes	3150.200	1,269.00 ea	39.25 /mh	2,490	1.00 /ea	1,269		/ea			3,759	4,880
	EQ Parapet Wall 25S04		62.98 cy		61,900		63,876				2,696	128,471	156,326
	0304- EQ Deck and beams 25S04												
	4500 psi Concrete With Xypex	3310.100	993.00 cy	/cy		505.00 /cy	536,568		/cy			536,568	536,568
	Slab Placement Count	3310.360	18.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Suspended Slab	3310.240	993.00 cy	39.25 /mh	50,044	/cy			/cy		42,500	92,545	115,065
	Shore Suspended Slab 15-up	3100.124	18,304.00 sf	39.25 /mh	215,530	7.50 /sf	144,144		/sf			359,674	456,662
	Slab Edge Form > 1'	3100.124	776.88 sf	39.25 /mh	12,197	2.00 /sf	1,554		/sf			13,751	19,239
	Suspended Slab Const Joint	3100.124	889.20 sf	39.25 /mh	12,215	2.00 /sf	1,778		/sf			13,994	19,491
	CJ Prep Elevated Slab CJ	3350.170	889.20 sf	39.25 /mh	873	0.50 /sf	445		/sf			1,317	1,710
	Finish- Hard Trowel	3350.110	18,304.00 sf	39.25 /mh	10,058	0.01 /sf	183		/sf			10,241	14,767
	Water Cure	3390.170	18,304.00 sf	39.25 /mh	7,184	0.08 /sf	1,464		/sf			8,649	11,882

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0304- EQ Deck and beams 25S04												
	Grind and Patch Deck Bottom	3350.130	18,304.00 sf	39.25 /mh	8,621	0.05 /sf	915		/sf			9,536	13,416
	Blockouts in Concrete	3150.194	140.00 sf	39.25 /mh	1,923	2.00 /sf	280		/sf			2,203	3,069
	Chamfer 3/4"	3150.625	200.00 lf	39.25 /mh	393	0.25 /lf	53		/lf			445	622
	Oil Suspended Slab Frm	3100.310	18,304.00 sf	39.25 /mh	1,437	0.06 /sf	1,171		/sf			2,608	3,255
	Nails and Hardware	3150.200	18,304.00 sf	/sf		0.04 /sf	732		/sf			732	732
	Rub Slab Bottom	3350.140	18,304.00 sf	39.25 /mh	21,553	0.95 /sf	17,389		/sf			38,942	48,641
	Beam Side Forms	3100.140	6,312.00 sf	39.25 /mh	86,711	2.00 /sf	13,255		/sf			99,966	138,986
	Beam Bottom Forms	3100.140	8,416.00 sf	39.25 /mh	99,098	6.00 /sf	53,021		/sf			152,119	196,713
	Expansion Joint Cork Sheets Neoprene at EQ Deck	3150.720	206.00 sf	39.25 /mh	2,021	25.00 /sf	5,408		/sf			7,429	8,339
	Smooth Dowels 1"	3210.106	103.00 ea	39.25 /mh	2,021	10.00 /ea	1,030		/ea			3,051	3,961
	Caulking 20 oz tube 1d x1w at EJ Deck	7920.300	206.00 lf	39.25 /mh	809	20.00 /tube	1,416		/lf			2,225	2,589
	Shore Suspended Slab 15-up 4' work surface outside of deck	3100.124	2,820.00 sf	39.25 /mh	33,206	7.50 /sf	22,208		/sf			55,413	70,355
	Roof Drain 6"	15403.240	8.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	EQ Deck and beams 25S04		793.17 cy		567,778		803,013				42,500	1,413,292	1,668,792
	0307- EQ Basin Concrete Columns 25S04												
	4500 psi Concrete With Xypex	3310.100	42.22 cy	/cy		505.00 /cy	22,815		/cy			22,815	22,815
	Pump Place Piers & Columns	3310.270	42.22 cy	39.25 /mh	3,546	/cy			/cy		1,807	5,354	6,950
	Formwork Rectangle Columns 16 -20'	3100.110	2,280.00 sf	39.25 /mh	22,373	4.00 /sf	9,576		/sf			31,949	42,016
	Liquid Curing Compounds	3390.170	2,280.00 sf	39.25 /mh	179	0.08 /sf	171		/sf			350	431
	Grind/Patch Columns	3350.130	2,280.00 sf	39.25 /mh	1,333	0.05 /sf	114		/sf			1,447	2,047
	Chamfer 3/4"	3150.625	1,140.00 lf	39.25 /mh	2,237	0.25 /lf	299		/lf			2,537	3,543
	Oil Column Forms	3100.310	2,280.00 sf	39.25 /mh	179	0.06 /sf	146		/sf			325	405
	Rub Columns	3350.140	2,280.00 sf	39.25 /mh	2,685	0.95 /sf	2,166		/sf			4,851	6,059
	Dimension Lumber	3150.200	2,280.00 sf	/sf		0.45 /sf	1,026		/sf			1,026	1,026
	Nails and Hardware	3150.200	2,280.00 sf	/sf		0.04 /sf	91		/sf			91	91
	EQ Basin Concrete Columns 25S04		42.22 cy		32,532		36,404				1,807	70,744	85,383
	CON Concrete				1,308,887		2,539,609	11,720		58,800	282,399	4,201,415	4,790,414
	25 - EQ EQ Basins				1,308,887		2,539,609	11,720		58,800	282,399	4,201,415	4,790,414
	25 - EQRVV EQ Return Valve Vault												
	CON Concrete												
	0247-1 Drilled Caissons EQ Valve Vault 25S11												
	Sub - Caisson	2475.500	405.00 vf	/vf		25.25 /vf	10,226		/vf			10,226	10,226
	Moltz Support For Sub - Caisson	2475.500	120.00 mnhr	39.25 /mh	4,710	/ls			/ls			4,710	6,830
	4500 psi Concrete	3310.100	33.13 cy	/cy		210.00 /cy	8,698		/cy			8,698	8,698
	Pump Place Tremie Conc	3310.310	33.13 cy	39.25 /mh	1,626	/cy			/cy		4,763	6,389	7,120
	Drop Rebar Cage in Caisson	2475.300	9.00 ea	39.25 /mh	1,413	/ea			/ea			1,413	2,049
	Finish- Hard Trowel	3350.110	15.90 sf	39.25 /mh	9	0.01 /sf	0		/sf			9	13
	Liquid Curing Compounds	3390.170	15.90 sf	39.25 /mh	1	0.08 /sf	1		/sf			2	3
	Rebar Chairs Special for Caisson	3200.980	324.00 ea	/ea		5.00 /ea	1,620		/ea			1,620	1,620
	Formwork Sonotube 18"	3100.112	36.00 lf	39.25 /mh	466	8.00 /lf	302		/lf			769	979
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	1,125	375	1,500	1,500
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	8,800.00 /mnth	2,200	450.00 /mnth	113		10,400.00 /mnth	2,600	700	5,613	6,603
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	500	1,450	1,450
	Safety special tie off	1116.100	1.00 ls	/ls		1,500.00 /ls	1,500		/ls			1,500	1,500
	Survey special Lisence survey caissons	1630.100	1.00 ls	39.25 /mh		0.00 /ls	0	2,500	/ls			2,500	2,500
	Clean up Caissons	3150.650	468.00 sf	39.25 /mh	1,102	/sf			/sf			1,102	1,598
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Drilled Caissons EQ Valve Vault 25S11		405.00 ft		11,527		22,460	2,500		6,475	7,088	50,050	55,238
	0302- EQ Valve Vault Sump Slab 25S11												
	4500 psi Concrete	3310.100	0.89 cy	/cy		210.00 /cy	200		/cy			200	200
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	0.89 cy	39.25 /mh	75	/cy			/cy		33	108	142
	Formwork S.O.G. Edge Form < 1'	3100.120	20.00 sf	39.25 /mh	196	2.00 /sf	42		/sf			238	327
	Finegrade Below Concrete	3150.650	24.00 sf	39.25 /mh	13	/sf			/sf			13	19
	Finish- Hard Trowel	3350.110	24.00 sf	39.25 /mh	13	0.01 /sf	0		/sf			13	19
	Water Cure	3390.170	24.00 sf	39.25 /mh	9	0.08 /sf	2		/sf			11	16
	Waterstop 6" Flat	3510.610	16.00 lf	39.25 /mh	63	8.00 /lf	134		/lf			197	225
	Oil SOG Form	3100.310	20.00 sf	39.25 /mh	2	0.06 /sf	1		/sf			3	4
	Nails and Hardware	3150.200	20.00 sf	/sf		0.04 /sf	1		/sf			1	1
	Dimension Lumber	3150.200	20.00 sf	/sf		0.45 /sf	9		/sf			9	9
	Slab Void - 12" Void with plastic and cover board	3100.320	24.00 sf	39.25 /mh	57	8.00 /sf	211		/sf			268	293
	Slab Void Slab edge retainer	3100.320	20.00 sf	39.25 /mh	79	5.00 /sf	110		/sf			189	224
	EQ Valve Vault Sump Slab 25S11		0.89 cy		506		711				33	1,250	1,478
	0302- EQ Valve Vault Base slab 25S11												
	4500 psi Concrete	3310.100	28.95 cy	/cy		210.00 /cy	6,504		/cy			6,504	6,504
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	28.95 cy	39.25 /mh	1,824	/cy			/cy		1,084	2,908	3,728
	Formwork S.O.G. Edge Form > 1'	3100.120	234.00 sf	39.25 /mh	2,296	2.00 /sf	491		/sf			2,788	3,821
	Finegrade Below Concrete	3150.650	468.00 sf	39.25 /mh	257	/sf			/sf			257	373
	Finish- Hard Trowel	3350.110	468.00 sf	39.25 /mh	257	0.01 /sf	5		/sf			262	378
	Water Cure	3390.170	468.00 sf	39.25 /mh	184	0.08 /sf	37		/sf			221	304

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- EQ Valve Vault Base slab 25S11												
	Blockouts in Concrete	3150.194	16.00 sf	39.25 /mh	220	2.00 /sf	32		/sf			252	351
	Waterstop 6" Flat	3510.610	88.00 lf	39.25 /mh	345	8.00 /lf	739		/lf			1,085	1,240
	Keyway Raised at walls	3150.620	88.00 lf	39.25 /mh	691	10.00 /lf	924		/lf			1,615	1,926
	Oil SOG Form	3100.310	146.96 sf	39.25 /mh	12	0.06 /sf	9		/sf			21	26
	Nails and Hardware	3150.200	146.96 sf	/sf		0.04 /sf	6		/sf			6	6
	Dimension Lumber	3150.200	146.96 sf	/sf		0.45 /sf	66		/sf			66	66
	Slab Void - 12" with plastic and cover board	3100.320	468.00 sf	39.25 /mh	1,102	8.00 /sf	4,118		/sf			5,221	5,717
	Slab Void - retainer board	3100.320	88.00 sf	39.25 /mh	345	5.00 /sf	484		/sf			829	985
	EQ Valve Vault Base slab 25S11		28.95 cy		7,533		13,417				1,084	22,034	25,423
	0302- Concrete Curb at hatch EQ Valve Vault 25S11												
	4500 psi Concrete	3310.100	1.00 cy	/cy		210.00 /cy	225		/cy			225	225
	Buggy Place Slab on Grade	3310.230	1.00 cy	39.25 /mh	168	/cy			/cy			168	244
	Formwork S.O.G. Edge Form < 1'	3100.120	56.67 sf	39.25 /mh	556	2.00 /sf	119		/sf			675	925
	Finegrade Below Concrete	3150.650	37.52 sf	39.25 /mh	21	/sf			/sf			21	30
	Finish- Hard Trowel	3350.110	37.52 sf	39.25 /mh	21	0.01 /sf	0		/sf			21	30
	Liquid Curing Compounds	3390.170	37.52 sf	39.25 /mh	3	0.08 /sf	3		/sf			6	7
	Chamfer 3/4"	3150.625	48.00 lf	39.25 /mh	94	0.25 /lf	13		/lf			107	149
	Oil SOG Form	3100.310	56.67 sf	39.25 /mh	4	0.06 /sf	4		/sf			8	10
	Nails and Hardware	3150.200	56.67 sf	/sf		0.04 /sf	2		/sf			2	2
	Dimension Lumber	3150.200	56.67 sf	/sf		0.45 /sf	26		/sf			26	26
	Concrete Curb at hatch EQ Valve Vault 25S11		0.70 cy		867		391					1,258	1,648
	0303- Concrete Walls EQ Valve Vault 25S11												
	Pump Place Walls	3310.260	23.70 cy	39.25 /mh	996	/cy			/cy		1,015	2,010	2,458
	4500 psi Concrete	3310.100	23.70 cy	/cy		210.00 /cy	5,326		/cy			5,326	5,326
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 4-8'	3100.180	1,280.00 sf	39.25 /mh	9,043	4.00 /sf	5,376		/sf			14,419	18,489
	CJ Prep Walls	3350.170	80.00 sf	39.25 /mh	79	0.15 /sf	12		/sf			91	126
	Finish- Top of Wall	3350.110	80.00 sf	39.25 /mh	44	0.01 /sf	1		/sf			45	65
	Liquid Curing Walls	3390.170	1,360.00 sf	39.25 /mh	53	0.08 /sf	102		/sf			155	179
	Grind/Patch Walls	3350.130	1,280.00 sf	39.25 /mh	603	0.05 /sf	64		/sf			667	938
	Blockouts in Concrete	3150.194	64.00 sf	39.25 /mh	879	2.00 /sf	128		/sf			1,007	1,403
	Rub Walls	3350.140	640.00 sf	39.25 /mh	1,005	0.95 /sf	608		/sf			1,613	2,065
	Oil Wall Forms	3100.310	1,280.00 sf	39.25 /mh	100	0.06 /sf	82		/sf			182	228
	Nails and Hardware	3150.200	1,280.00 sf	/sf		0.04 /sf	51		/sf			51	51
	Form Ties 12"	3150.632	320.00 ea	/ea		1.85 /ea	592		/ea			592	592
	Dimension Lumber	3150.200	1,280.00 sf	/sf		0.45 /sf	576		/sf			576	576
	Rebar Templates	3200.980	80.00 lf	39.25 /mh	157	0.50 /lf	40		/lf			197	268
	Epoxy Bonding Agent tie hole	3150.200	640.00 ea	39.25 /mh	1,256	1.00 /ea	640		/ea			1,896	2,461
	Concrete Walls EQ Valve Vault 25S11		23.70 cy		14,215		13,598				1,015	28,828	35,224
	0304- Suspended Slab Concrete EQ Valve Vault 25S11												
	4500 psi Concrete	3310.100	17.00 cy	/cy		210.00 /cy	3,820		/cy			3,820	3,820
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Suspended Slab	3310.240	17.00 cy	39.25 /mh	1,428	/cy			/cy	728		2,156	2,798
	Shore Suspended Slab 0-15'	3100.124	384.00 sf	39.25 /mh	3,768	6.00 /sf	2,419		/sf			6,187	7,883
	Slab Edge Form < 1'	3100.124	80.00 sf	39.25 /mh	1,570	2.00 /sf	168		/sf			1,738	2,445
	Finish- Hard Trowel	3350.110	384.00 sf	39.25 /mh	211	0.01 /sf	4		/sf			215	310
	Water Cure	3390.170	384.00 sf	39.25 /mh	151	0.08 /sf	31		/sf			181	249
	Grind and Patch Deck Bottom	3350.130	384.00 sf	39.25 /mh	181	0.05 /sf	19		/sf			200	281
	Blockouts in Concrete	3150.194	88.00 sf	39.25 /mh	1,209	2.00 /sf	176		/sf			1,385	1,929
	Chamfer 3/4"	3150.625	240.00 lf	39.25 /mh	471	0.25 /lf	63		/lf			534	746
	Oil Suspended Slab Frm	3100.310	384.00 sf	39.25 /mh	30	0.06 /sf	25		/sf			55	68
	Nails and Hardware	3150.200	384.00 sf	/sf		0.04 /sf	15		/sf			15	15
	Rub Slab Bottom	3350.140	384.00 sf	39.25 /mh	452	0.95 /sf	365		/sf			817	1,020
	Beam Side Forms	3100.140	112.00 sf	39.25 /mh	1,539	2.00 /sf	235		/sf			1,774	2,466
	Beam Bottom Forms	3100.140	224.00 sf	39.25 /mh	3,077	6.00 /sf	1,411		/sf			4,488	5,873
	Suspended Slab Concrete EQ Valve Vault 25S11		14.22 cy		14,087		8,751				728	23,565	29,904
	CON Concrete				48,734		59,328	2,500		6,475	9,948	126,985	148,915
	25 - EQRVV EQ Return Valve Vault				48,734		59,328	2,500		6,475	9,948	126,985	148,915
	27 - ODOR Odor Control												
	CON Concrete												
	0302- Odor Control Outlet Box Slab elev 21.42 PG 27S01												
	4500 psi Concrete	3310.100	4.00 cy	/cy		210.00 /cy	899		/cy			899	899
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	4.00 cy	39.25 /mh	336	/cy			/cy	150		486	637
	Formwork S.O.G. Edge Form < 1'	3100.120	40.00 sf	39.25 /mh	550	2.00 /sf	84		/sf			634	881
	Finegrade Below Concrete	3150.650	91.00 sf	39.25 /mh	50	/sf			/sf			50	73
	Finish- Hard Trowel	3350.110	91.00 sf	39.25 /mh	50	0.01 /sf	1		/sf			51	73
	Water Cure	3390.170	91.00 sf	39.25 /mh	36	0.08 /sf	7		/sf			43	59
	Waterstop 6" Flat	3510.610	53.00 lf	39.25 /mh	208	8.00 /lf	445		/lf			653	747
	Keyway Raised Keyway at Wall	3150.620	53.00 lf	39.25 /mh	416	10.00 /lf	557		/lf			973	1,160
	Oil SOG Form	3100.310	40.00 sf	39.25 /mh	3	0.06 /sf	3		/sf			6	7
	Nails and Hardware	3150.200	40.00 sf	/sf		0.04 /sf	2		/sf			2	2
	Dimension Lumber	3150.200	40.00 sf	/sf		0.45 /sf	18		/sf			18	18
	Odor Control Outlet Box Slab elev 21.42 PG 27S01		3.37 cy		1,648		2,015				150	3,813	4,555
	0302- Slab at elev 23.36 27S01												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- Slab at elev 23.36 27S01												
	4500 psi Concrete	3310.100	35.15 cy	/cy		210.00 /cy	7,898		/cy			7,898	7,898
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	35.15 cy	39.25 /mh	2,952	/cy			/cy		1,316	4,269	5,597
	Formwork S.O.G. Edge Form > 1'	3100.120	143.00 sf	39.25 /mh	1,964	2.00 /sf	300		/sf			2,265	3,149
	Finegrade Below Concrete	3150.650	884.00 sf	39.25 /mh	486	/sf			/sf			486	704
	Finish- Hard Trowel	3350.110	884.00 sf	39.25 /mh	486	0.01 /sf	9		/sf			495	713
	Water Cure	3390.170	884.00 sf	39.25 /mh	347	0.08 /sf	71		/sf			418	574
	Blockouts in Concrete	3150.194	30.00 sf	39.25 /mh	412	2.00 /sf	60		/sf			472	658
	Waterstop 6" Flat	3510.610	144.00 lf	39.25 /mh	565	8.00 /lf	1,210		/lf			1,775	2,029
	Keyway Raised at Walls	3150.620	144.00 lf	39.25 /mh	1,130	10.00 /lf	1,512		/lf			2,642	3,151
	Oil SOG Form	3100.310	143.00 sf	39.25 /mh	11	0.06 /sf	9		/sf			20	25
	Nails and Hardware	3150.200	143.00 sf	/sf		0.04 /sf	6		/sf			6	6
	Dimension Lumber	3150.200	143.00 sf	/sf		0.45 /sf	64		/sf			64	64
	Slab at elev 23.36 27S01		35.15 cy		8,354		11,138				1,316	20,809	24,568
	0302- Concrete Slab at Grade West Side of Biofilter 27S01												
	4500 psi Concrete	3310.100	15.76 cy	/cy		210.00 /cy	3,542		/cy			3,542	3,542
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	15.76 cy	39.25 /mh	1,324	/cy			/cy		590	1,914	2,510
	Formwork S.O.G. Edge Form > 1'	3100.120	111.72 sf	39.25 /mh	1,535	2.00 /sf	235		/sf			1,769	2,460
	Finegrade Below Concrete	3150.650	320.00 sf	39.25 /mh	176	/sf			/sf			176	255
	Finish- Hard Trowel	3350.110	320.00 sf	39.25 /mh	176	0.01 /sf	3		/sf			179	258
	Liquid Curing Compounds	3390.170	320.00 sf	39.25 /mh	25	0.08 /sf	24		/sf			49	60
	Chamfer 3/4"	3150.625	52.00 lf	39.25 /mh	102	0.25 /lf	14		/lf			116	162
	Expansion Joint	3150.720	42.56 sf	39.25 /mh	167	3.00 /sf	134		/sf			301	376
	Expansion Joint Sealant	3150.720	32.00 lf	39.25 /mh	126	2.40 /lf	81		/lf			206	263
	Oil SOG Form	3100.310	111.72 sf	39.25 /mh	9	0.06 /sf	7		/sf			16	20
	Nails and Hardware	3150.200	111.72 sf	/sf		0.04 /sf	4		/sf			4	4
	Dimension Lumber	3150.200	111.72 sf	/sf		0.45 /sf	50		/sf			50	50
	Saw Cut S-O-G	3350.160	60.00 lf	39.25 /mh	71	0.50 /lf	30		0.50 /lf	30		131	162
	SOG Rebar	3210.104	1.97 tn	39.25 /mh	2,320	1,600.00 /tn	3,310		/tn			5,630	6,674
	Smooth Dowels 5/8"	3210.106	32.00 ea	39.25 /mh	314	5.00 /ea	160		/ea			474	615
	Concrete Slab at Grade West Side of Biofilter 27S01		15.76 cy		6,343		7,594			30	590	14,558	17,412
	0302- Odor Control Slab East of Biofilter Incclude Ramp CR 314 27S01												
	4500 psi Concrete	3310.100	52.12 cy	/cy		210.00 /cy	11,711		/cy			11,711	11,711
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	52.12 cy	39.25 /mh	3,283	/cy			/cy		1,952	5,235	6,712
	Formwork S.O.G. Edge Form > 1'	3100.120	223.44 sf	39.25 /mh	3,070	2.00 /sf	469		/sf			3,539	4,920
	Finegrade Below Concrete	3150.650	1,058.00 sf	39.25 /mh	581	/sf			/sf			581	843
	Finish- Hard Trowel	3350.110	1,058.00 sf	39.25 /mh	581	0.01 /sf	11		/sf			592	854
	Liquid Curing Compounds	3390.170	1,058.00 sf	39.25 /mh	83	0.08 /sf	79		/sf			162	200
	Blockouts in Concrete	3150.194	24.00 sf	39.25 /mh	330	2.00 /sf	48		/sf			378	526
	Chamfer 3/4"	3150.625	118.00 lf	39.25 /mh	232	0.25 /lf	31		/lf			263	367
	Expansion Joint	3150.720	66.50 sf	39.25 /mh	261	3.00 /sf	209		/sf			470	588
	Expansion Joint Sealant	3150.720	50.00 lf	39.25 /mh	196	2.40 /lf	126		/lf			322	411
	Oil SOG Form	3100.310	223.44 sf	39.25 /mh	18	0.06 /sf	14		/sf			32	40
	Nails and Hardware	3150.200	223.44 sf	/sf		0.04 /sf	9		/sf			9	9
	Dimension Lumber	3150.200	223.44 sf	/sf		0.45 /sf	101		/sf			101	101
	Saw Cut S-O-G	3350.160	128.00 lf	39.25 /mh	151	0.50 /lf	64		0.50 /lf	64		279	347
	SOG Rebar	3210.104	6.52 tn	39.25 /mh	6,393	1,600.00 /tn	10,946		/tn			17,338	20,215
	Smooth Dowels 5/8" SS	3210.106	49.00 ea	39.25 /mh	481	5.00 /ea	245		/ea			726	942
	Odor Control Slab East of Biofilter Incclude Ramp CR 314 27S01		52.12 cy		15,659		24,063			64	1,952	41,737	48,784
	0303- Concrete Walls 1' tall at lowest level odor control elev 22.42 PG27S01												
	Pump Place Walls	3310.260	1.00 cy	39.25 /mh	126	/cy			/cy		43	169	225
	4500 psi Concrete	3310.100	1.00 cy	/cy		210.00 /cy	225		/cy			225	225
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Job Built with Plyform 0-4'	3100.180	44.00 sf	39.25 /mh	432	2.00 /sf	92		/sf			524	718
	CJ Prep Walls	3350.170	22.00 sf	39.25 /mh	22	0.15 /sf	3		/sf			25	35
	Finish- Top of Wall	3350.110	22.00 sf	39.25 /mh	12	0.01 /sf	0		/sf			12	18
	Liquid Curing Walls	3390.170	66.00 sf	39.25 /mh	3	0.08 /sf	5		/sf			8	9
	Grind/Patch Walls	3350.130	44.00 sf	39.25 /mh	21	0.05 /sf	2		/sf			23	32
	Waterstop 6" Flat	3510.610	22.00 lf	39.25 /mh	86	8.00 /lf	185		/lf			271	310
	Rub Walls	3350.140	22.00 sf	39.25 /mh	35	0.95 /sf	21		/sf			55	71
	Oil Wall Forms	3100.310	44.00 sf	39.25 /mh	3	0.06 /sf	3		/sf			6	8
	Nails and Hardware	3150.200	44.00 sf	/sf		0.04 /sf	2		/sf			2	2
	Form Ties 12"	3150.632	11.00 ea	/ea		1.85 /ea	20		/ea			20	20
	Dimension Lumber	3150.200	44.00 sf	/sf		0.45 /sf	20		/sf			20	20
	Rebar Templates	3200.980	22.00 lf	39.25 /mh	43	0.50 /lf	11		/lf			54	74
	Flow Fill	3310.100	2.00 cy	/cy		180.00 /cy	378		/cy			378	378
	Concrete Walls 1' tall at lowest level odor control elev 22.42 PG27S01		0.82 cy		782		967				43	1,792	2,144
	0303- Concrete Walls at Biofilter 27S01												
	Pump Place Walls	3310.260	65.78 cy	39.25 /mh	4,144	/cy			/cy		2,815	6,959	8,824
	4500 psi Concrete	3310.100	65.78 cy	/cy		210.00 /cy	14,780		/cy			14,780	14,780
	Wall Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Gang Form System 4-8'	3100.180	96.00 sf	39.25 /mh	754	4.00 /sf	403		/sf			1,157	1,496
	Gang Form System 12-16'	3100.180	3,456.00 sf	39.25 /mh	24,417	4.00 /sf	14,515		/sf			38,932	49,919
	Wall Bulkhead Forms	3150.192	66.00 sf	39.25 /mh	1,192	2.00 /sf	139		/sf			1,330	1,866
	CJ Prep Walls	3350.170	202.00 sf	39.25 /mh	198	0.15 /sf	30		/sf			229	318

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0303- Concrete Walls at Biofilter 27S01												
	Finish- Top of Wall	3350.110	136.00 sf	39.25 /mh	75	0.01 /sf	1		/sf			76	110
	Liquid Curing Walls	3390.170	3,688.00 sf	39.25 /mh	145	0.08 /sf	277		/sf			421	487
	Grind/Patch Walls	3350.130	3,552.00 sf	39.25 /mh	1,673	0.05 /sf	178		/sf			1,851	2,603
	Blockouts in Concrete	3150.194	42.00 sf	39.25 /mh	577	2.00 /sf	84		/sf			661	921
	Waterstop 6" Flat	3510.610	66.00 lf	39.25 /mh	259	8.00 /lf	554		/lf			813	930
	Chamfer 3/4"	3150.625	272.00 lf	39.25 /mh	534	0.25 /lf	71		/lf			605	845
	Rub Walls	3350.140	3,424.00 sf	39.25 /mh	5,376	0.95 /sf	3,253		/sf			8,628	11,048
	Oil Wall Forms	3100.310	3,552.00 sf	39.25 /mh	279	0.06 /sf	227		/sf			506	632
	Nails and Hardware	3150.200	3,552.00 sf	/sf		0.04 /sf	142		/sf			142	142
	Form Ties 12"	3150.632	888.00 ea	/ea		1.85 /ea	1,643		/ea			1,643	1,643
	Dimension Lumber	3150.200	3,552.00 sf	/sf		0.45 /sf	1,598		/sf			1,598	1,598
	Rebar Templates	3200.980	136.00 lf	39.25 /mh	267	0.50 /lf	68		/lf			335	455
	Epoxy Bonding Agent tie holes	3150.200	1,776.00 ea	39.25 /mh	3,485	1.00 /ea	1,776		/ea			5,261	6,830
	Concrete Walls at Biofilter 27S01		65.78 cy		43,373		39,740				2,815	85,929	105,446
	0310- Equipment Pad Concrete Odor Control 27S01												
	Equipment Pad Form > 8"	3100.164	176.00 sf	39.25 /mh	2,418	2.00 /sf	370		/sf			2,787	3,875
	Oil Equipment Pad Form	3100.310	176.00 sf	39.25 /mh	14	0.06 /sf	11		/sf			25	31
	4500 psi Concrete	3310.100	16.89 cy	/cy		210.00 /cy	3,795		/cy			3,795	3,795
	Pump Place Equipment Pads	3310.300	16.89 cy	39.25 /mh	709	/cy			/cy		723	1,432	1,751
	Liquid Curing Compounds	3390.170	456.00 sf	39.25 /mh	36	0.08 /sf	34		/sf			70	86
	Finish- Hard Trowel	3350.110	456.00 sf	39.25 /mh	251	0.01 /sf	5		/sf			255	368
	Chamfer	3150.625	176.00 lf	39.25 /mh	345	0.25 /lf	46		/lf			392	547
	Misc. Pad Rebar	3210.104	2.11 tn	39.25 /mh	2,320	1,600.00 /tn	3,547		/tn			5,867	6,911
	Nails and Hardware	3150.200	176.00 sf	/sf		0.04 /sf	7		/sf			7	7
	Drill and Epoxy #5	3210.101	240.00 ea	39.25 /mh	1,884	5.00 /ea	1,260		/ea			3,144	3,992
	CJ Prep Slab 1/4" Equip Pad	3350.170	456.00 sf	39.25 /mh	1,790	0.50 /sf	228		/sf			2,018	2,823
	Epoxy Bonding Agent	3150.200	456.00 sf	39.25 /mh	895	2.00 /sf	912		/sf			1,807	2,210
	Equipment Pad Concrete Odor Control 27S01		16.89 cy		10,661		10,215				723	21,599	26,397
	CON Concrete				86,821		95,733			94	7,589	190,237	229,307
	27 - ODOR Odor Control				86,821		95,733			94	7,589	190,237	229,307
	45 - RELEC Reuse Electrical Room												
	CON Concrete												
	0247-1 Drilled Caissons Reuse Pump Station 45S01												
	Sub - Caisson	2475.500	686.00 vf	/vf		25.25 /vf	17,322		/vf			17,322	17,322
	Moltz Support For Sub - Caisson	2475.500	100.00 mnhr	39.25 /mh	3,925	/ls			/ls			3,925	5,691
	4500 psi Concrete	3310.100	56.12 cy	/cy		210.00 /cy	14,732		/cy			14,732	14,732
	Pump Place Tremie Conc	3310.310	56.12 cy	39.25 /mh	2,754	/cy			/cy		8,068	10,821	12,060
	Drop Rebar Cage in Caisson	2475.300	14.00 ea	39.25 /mh	2,198	/ea			/ea			2,198	3,187
	Finish- Hard Trowel	3350.110	24.74 sf	39.25 /mh	14	0.01 /sf	0		/sf			14	20
	Liquid Curing Compounds	3390.170	24.74 sf	39.25 /mh	2	0.08 /sf	2		/sf			4	5
	Rebar Chairs for caisson special	3200.980	672.00 ea	/ea		5.00 /ea	3,360		/ea			3,360	3,360
	Formwork Sonotube 18"	3100.112	56.00 lf	39.25 /mh	725	8.00 /lf	470		/lf			1,196	1,522
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	8,800.00 /mnth	2,200	450.00 /mnth	113		10,400.00 /mnth	2,600	700	5,613	6,603
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	1,125	375	1,500	1,500
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	500	1,450	1,450
	Safety special tie off	1116.100	1.00 ls	/ls		1,500.00 /ls	1,500		/ls			1,500	1,500
	Survey Lisenced for Caissons	1630.100	1.00 ls	39.25 /mh		0.00 /ls	0	2,500	/ls			2,500	2,500
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Clean up after caissons	3150.650	616.00 sf	39.25 /mh	1,451	/sf			/sf			1,451	2,103
	Drilled Caissons Reuse Pump Station 45S01		686.00 ft		13,268		37,499	2,500		6,475	10,393	70,135	76,105
	0302- Reuse Pump Elect Base Slab 45S01												
	4500 psi Concrete	3310.100	74.00 cy	/cy		210.00 /cy	16,628		/cy			16,628	16,628
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	74.00 cy	39.25 /mh	4,973	/cy			/cy		2,771	7,744	9,981
	Formwork S.O.G. Edge Form > 1'	3100.120	616.00 sf	39.25 /mh	7,253	2.00 /sf	1,294		/sf			8,547	11,811
	Formwork S.O.G. Const Joints > 1'	3100.120	45.00 sf	39.25 /mh	812	2.00 /sf	95		/sf			907	1,273
	CJ Prep Slab	3350.170	45.00 sf	39.25 /mh	44	0.15 /sf	7		/sf			51	71
	Finegrade Below Concrete	3150.650	930.00 sf	39.25 /mh	511	/sf			/sf			511	741
	Finish- Hard Trowel	3350.110	930.00 sf	39.25 /mh	511	0.01 /sf	9		/sf			520	750
	Water Cure	3390.170	930.00 sf	39.25 /mh	365	0.08 /sf	74		/sf			439	604
	Chamfer 3/4"	3150.625	154.00 lf	39.25 /mh	302	0.25 /lf	40		/lf			343	479
	Oil SOG Form	3100.310	507.00 sf	39.25 /mh	40	0.06 /sf	32		/sf			72	90
	Nails and Hardware	3150.200	462.00 sf	/sf		0.04 /sf	18		/sf			18	18
	Dimension Lumber	3150.200	462.00 sf	/sf		0.45 /sf	208		/sf			208	208
	Slab Void -Soil Retainer	3100.320	308.00 sf	39.25 /mh	1,209	5.00 /sf	1,694		/sf			2,903	3,447
	Slab Void - 12" with plastic and cover board	3100.320	930.00 sf	39.25 /mh	2,190	8.00 /sf	8,184		/sf			10,374	11,360
	Beam Side Forms	3100.140	308.00 sf	39.25 /mh	4,231	2.00 /sf	647		/sf			4,878	6,782
	Reuse Pump Elect Base Slab 45S01		103.33 cy		22,442		28,930				2,771	54,144	64,242
	0302- Slab Reuse Elect Room Stoop Pads 45S01												
	4500 psi Concrete	3310.100	3.15 cy	/cy		210.00 /cy	708		/cy			708	708
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	3.15 cy	39.25 /mh	530	/cy			/cy		118	648	886

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0302- Slab Reuse Elect Room Stoop Pads 45S01												
	Formwork S.O.G. Edge Form > 1'	3100.120	63.84 sf	39.25 /mh	877	2.00 /sf	134		/sf			1,011	1,406
	Finegrade Below Concrete	3150.650	64.00 sf	39.25 /mh	35	/sf			/sf			35	51
	Finish- Hard Trowel	3350.110	64.00 sf	39.25 /mh	35	0.01 /sf	1		/sf			36	52
	Liquid Curing Compounds	3390.170	64.00 sf	39.25 /mh	5	0.08 /sf	5		/sf			10	12
	Chamfer 3/4"	3150.625	32.00 lf	39.25 /mh	63	0.25 /lf	8		/lf			71	99
	Road Base Below Concrete	2305.300	2.37 bcy	39.25 /mh	47	25.00 /ton	117		/cy			164	185
	Expansion Joint	3150.720	21.28 sf	39.25 /mh	84	3.00 /sf	67		/sf			151	188
	Expansion Joint Sealant	3150.720	16.00 lf	39.25 /mh	63	2.40 /lf	40		/lf			103	131
	Oil SOG Form	3100.310	63.84 sf	39.25 /mh	5	0.06 /sf	4		/sf			9	11
	Nails and Hardware	3150.200	63.84 sf	/sf		0.04 /sf	3		/sf			3	3
	Dimension Lumber	3150.200	63.84 sf	/sf		0.45 /sf	29		/sf			29	29
	SOG Rebar	3210.104	0.39 tn	39.25 /mh	464	1,600.00 /tn	662		/tn			1,126	1,335
	Smooth Dowels 5/8"	3210.106	16.00 ea	39.25 /mh	157	5.00 /ea	80		/ea			237	308
	Slab Reuse Elect Room Stoop Pads 45S01		3.15 cy		2,364		1,859				118	4,340	5,404
	0302-B Tee Toppings Reuse Electrical 45S04												
	4500 psi Concrete	3310.100	11.00 cy	/cy		210.00 /cy	2,472		/cy			2,472	2,472
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Pump Place Slab on Grade	3310.230	11.00 cy	39.25 /mh	1,386	/cy			/cy		412	1,798	2,422
	Formwork S.O.G. Edge Form < 1'	3100.120	49.28 sf	39.25 /mh	677	2.00 /sf	103		/sf			781	1,085
	Finish- Hard Trowel	3350.110	785.54 sf	39.25 /mh	432	0.01 /sf	8		/sf			440	634
	Liquid Curing Compounds	3390.170	785.54 sf	39.25 /mh	62	0.08 /sf	59		/sf			121	148
	Blockouts in Concrete	3150.194	120.00 sf	39.25 /mh	1,649	2.00 /sf	240		/sf			1,889	2,630
	Oil SOG Form	3100.310	49.28 sf	39.25 /mh	4	0.06 /sf	3		/sf			7	9
	Nails and Hardware	3150.200	49.28 sf	/sf		0.04 /sf	2		/sf			2	2
	Dimension Lumber	3150.200	49.28 sf	/sf		0.45 /sf	22		/sf			22	22
	CJ Prep Slab	3350.170	785.54 sf	39.25 /mh	771	0.15 /sf	118		/sf			889	1,236
	Epoxy Bonding Agent	3150.200	785.54 sf	39.25 /mh	1,542	2.00 /sf	1,571		/sf			3,113	3,806
	Tar Paper at Joints	3150.630	350.00 sf	39.25 /mh	687	1.00 /sf	385		/sf			1,072	1,381
	Foam Back blockouts at topping	7240.100	42.00 sf	/sf		25.00 /sf	1,050		/sf			1,050	1,050
	Tee Toppings Reuse Electrical 45S04		9.60 cy		7,208		6,033				412	13,653	16,897
	0303- Concrete Walls Reuse Pump Station East side at masonry 45S02												
	Pump Place Walls	3310.260	10.02 cy	39.25 /mh	1,684	/cy			/cy		429	2,113	2,871
	4500 psi Concrete	3310.100	10.02 cy	/cy		210.00 /cy	2,252		/cy			2,252	2,252
	Gang Form System 16'->	3100.180	541.24 sf	39.25 /mh	4,249	4.00 /sf	2,273		/sf			6,522	8,434
	Wall Bulkhead Forms	3150.192	38.66 sf	39.25 /mh	698	2.00 /sf	81		/sf			779	1,093
	CJ Prep Walls	3350.170	52.66 sf	39.25 /mh	52	0.15 /sf	8		/sf			60	83
	Finish- Top of Wall	3350.110	14.00 sf	39.25 /mh	8	0.01 /sf	0		/sf			8	11
	Liquid Curing Walls	3390.170	555.24 sf	39.25 /mh	22	0.08 /sf	42		/sf			63	73
	Grind/Patch Walls	3350.130	541.24 sf	39.25 /mh	255	0.05 /sf	27		/sf			282	397
	Blockouts in Concrete	3150.194	84.00 sf	39.25 /mh	1,154	2.00 /sf	168		/sf			1,322	1,841
	Chamfer 3/4"	3150.625	54.00 lf	39.25 /mh	106	0.25 /lf	14		/lf			120	168
	Rub Walls	3350.140	266.00 sf	39.25 /mh	418	0.95 /sf	253		/sf			670	858
	Oil Wall Forms	3100.310	541.24 sf	39.25 /mh	42	0.06 /sf	35		/sf			77	96
	Nails and Hardware	3150.200	541.24 sf	/sf		0.04 /sf	22		/sf			22	22
	Form Ties 12"	3150.632	135.31 ea	/ea		1.85 /ea	250		/ea			250	250
	Dimension Lumber	3150.200	541.24 sf	/sf		0.45 /sf	244		/sf			244	244
	Rebar Templates	3200.980	14.00 lf	39.25 /mh	27	0.50 /lf	7		/lf			34	47
	Form Special Frame Door Blockout	3150.200	1.00 ls	39.25 /mh	628	250.00 /sf	250		/ls			878	1,161
	Dovetail Slots	4080.150	228.00 lf	39.25 /mh	895	7.00 /lf	1,676		/lf			2,571	2,973
	Epoxy Bonding Agent tie hole	3150.200	270.00 ea	39.25 /mh	530	1.00 /ea	270		/ea			800	1,038
	Concrete Walls Reuse Pump Station East side at masonry 45S02		10.02 cy		10,767		7,871				429	19,067	23,912
	0310- Reuse Vert Turbine Pump Pads 4ea												
	Equipment Pad Form > 8"	3100.164	160.00 sf	39.25 /mh	3,140	2.00 /sf	336		/sf			3,476	4,889
	Oil Equipment Pad Form	3100.310	160.00 sf	39.25 /mh	13	0.06 /sf	10		/sf			23	28
	4500 psi Concrete	3310.100	7.41 cy	/cy		210.00 /cy	1,664		/cy			1,664	1,664
	Other Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Buggy Place Equipment Pads	3310.300	7.41 cy	39.25 /mh	1,244	/cy			/cy			1,244	1,804
	Liquid Curing Compounds	3390.170	100.00 sf	39.25 /mh	8	0.08 /sf	8		/sf			15	19
	Finish- Hard Trowel	3350.110	100.00 sf	39.25 /mh	55	0.01 /sf	1		/sf			56	81
	Chamfer	3150.625	112.00 lf	39.25 /mh	220	0.25 /lf	29		/lf			249	348
	Misc. Pad Rebar	3210.104	0.93 tn	39.25 /mh	1,090	1,600.00 /tn	1,555		/tn			2,646	3,136
	Nails and Hardware	3150.200	160.00 sf	/sf		0.04 /sf	6		/sf			6	6
	Drill and Epoxy #6	3210.101	80.00 ea	39.25 /mh	942	6.00 /ea	504		/ea			1,446	1,870
	Sleeve SS 30" x 24"	15121.200	4.00 ea	39.25 /mh	2,512	2,500.00 /ea	10,000		/ea			12,512	13,642
	Reuse Vert Turbine Pump Pads 4ea		7.41 cy		9,224		14,114					23,338	27,488
	CON Concrete				65,272		96,306	2,500		6,475	14,123	184,677	214,049
	45 - RELEC Reuse Electrical Room				65,272		96,306	2,500		6,475	14,123	184,677	214,049
	033000.00 Cast In Place Concrete				3,164,815		4,532,121	2,007,920		1,106,811	833,092	11,644,759	13,068,926
	034141.00 Precast Concrete Roof & Wall Panels												
	16 - EQEQUIP EQ Equipment Room												
	CON PRE Concrete Precast												
	0330- Precast Roof panels EQ Equip Room												
	Sub - Precast Subcontr	4000.981	1.00 ls	/ls		/ls		293,190	/ls			293,190	293,190
	Bearing Plates	5001.130	28.00 ea	39.25 /mh	2,198	/ea			/ea			2,198	3,187
	Side Angle Plates	5001.130	16.00 ea	39.25 /mh	314	/ea			/ea			314	455

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0380- Precast Roof panels EQ Equip Room												
	Sub - Hoists & Cranes	14600.100	1.00 ls	/ls		/ls		0	/ls				
	Field Welding - Carbon Steel	5000.985	24.00 hrs	39.25 /mh	942	/hrs		3,000	/hrs			3,942	4,366
	Epoxy Anchor 3/4 x 7in SS 304	5001.053	32.00 ea	39.25 /mh	628	15.00 /ea	480		/ea			1,108	1,391
	Precast Roof panels EQ Equip Room				4,082		480	296,190				300,752	302,589
	CON PRE Concrete Precast				4,082		480	296,190				300,752	302,589
	16 - EQEQUIP EQ Equipment Room				4,082		480	296,190				300,752	302,589
	23 - WPS PS West Primary Sludge Pump Station												
	CON PRE Concrete Precast												
	0380- Precast Concrete Tees West Sludge Pump Station 23S04												
	Sub - Precast Subcontr	4000.981	1.00 ls	/ls		/ls		0	/ls				
	Bearing Plates	5001.130	24.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Angle Brackets	5001.130	42.00 ea	39.25 /mh	824	/ea			/ea			824	1,195
	Sub - Hoists & Cranes	14600.100	1.00 ls	/ls		/ls			/ls				
	Field Welding - Carbon Steel	5000.985	40.00 hrs	39.25 /mh	1,570	/hrs		5,000	/hrs			6,570	7,277
	Epoxy Anchor 3/4 x 7in SS 304	5001.053	84.00 ea	39.25 /mh	1,649	15.00 /ea	1,260		/ea			2,909	3,650
	Caulking 10.3 oz tube 1d x1w	7920.300	530.00 lf	39.25 /mh	12,482	20.00 /tube	7,288		/lf			19,769	25,386
	Precast Concrete Tees West Sludge Pump Station 23S04				18,408		8,548	5,000				31,956	40,239
	CON PRE Concrete Precast				18,408		8,548	5,000				31,956	40,239
	23 - WPS PS West Primary Sludge Pump Station				18,408		8,548	5,000				31,956	40,239
	45 - RELEC Reuse Electrical Room												
	CON PRE Concrete Precast												
	0380- Precast Concrete Reuse Electric Room 45S04												
	Sub - Precast Subcontr Roof Panels	4000.981	1.00 ls	/ls		/ls		0	/ls				
	Bearing Plates	5001.130	60.00 ea	39.25 /mh	4,710	/ea			/ea			4,710	6,830
	Angle Plates	5001.130	76.00 ea	39.25 /mh	1,492	/ea			/ea			1,492	2,163
	Sub - Hoists & Cranes	14600.100	1.00 ls	/ls		/ls			/ls				
	Field Welding - Carbon Steel	5000.985	40.00 hrs	39.25 /mh	1,570	/hrs		5,000	/hrs			6,570	7,277
	Epoxy Anchor 3/4 x 7in SS 304	5001.053	152.00 ea	39.25 /mh	2,983	15.00 /ea	2,280		/ea			5,263	6,605
	Precast Concrete Reuse Electric Room 45S04				10,755		2,280	5,000				18,035	22,874
	CON PRE Concrete Precast				10,755		2,280	5,000				18,035	22,874
	45 - RELEC Reuse Electrical Room				10,755		2,280	5,000				18,035	22,874
	034141.00 Precast Concrete Roof & Wall Panels				33,245		11,308	306,190				350,742	365,702
042200.00	Concrete Unit Masonry												
00 - GEN	General												
MAS	Masonry												
	014- General Masonry and Winter Protection												
	Winter Conditions	1572.100	4.00 Mnth	/Mnth		2,500.00 /Mnth	10,000		/Mnth			10,000	10,000
	Temp Enclosure	1572.100	4,000.00 sf	39.25 /mh	15,700	1.00 /sf	4,000		/sf			19,700	26,765
	2012 Allmand Self Cont. 1M BTU Heater(In @ 4.0 gal/hr w/ 2 burners+1 gal/hr Gen running *3 24/7) (L)	1900.400	3.00 Mnth	/Mnth		350.00 /Mnth	1,050		4,500.00 /Mnth	13,500	19,500	34,050	34,050
	Winter Heat Fuel	1572.100	4.00 Mnth	/Mnth		/Mnth			/Mnth				
	Sub - Masonry Subcontr Entire Job	4000.980	1.00 ls	/ls		/ls		950,000	/ls			950,000	950,000
	Sub - Masonry Bond Entire Job	4000.980	1.00 ls	/ls		/ls		19,000	/ls			19,000	19,000
	Stucco Subcontractor patch EQ Pump Walls	9000.110	1.00 ls	/ls		/ls		8,000	/ls			8,000	8,000
	Temporary Protection plywood for clarifier covers	1116.200	2.00 ls	/ls		2,500.00 /ls	5,000		/ls			5,000	5,000
	General Masonry and Winter Protection		4.00 mo		15,700		20,050	977,000		13,500	19,500	1,045,750	1,052,815
	MAS Masonry				15,700		20,050	977,000		13,500	19,500	1,045,750	1,052,815
	00 - GEN General				15,700		20,050	977,000		13,500	19,500	1,045,750	1,052,815
	16 - EQEQUIP EQ Equipment Room												
	MAS Masonry												
	04000A - EQ Equipment Room Masonry 16A03												
	Sub - Masonry Subcontr (1330 sf) 8" struct w/ 990 sf 4" CMU	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Engineering for Clarifier Covers	4000.210	1.00 ea	39.25 /mh		/ea		5,000	/ea			5,000	5,000
	Unload & Dray CMU Rebar	4000.210	1.00 ls	39.25 /mh	942	/ls			/ls			942	1,366
	Temp Shore Double Door	4000.210	1.00 ea	39.25 /mh	628	150.00 /ea	150		/ea			778	1,061
	Temp Shore Scupper	4000.210	2.00 ea	39.25 /mh	314	20.00 /ea	40		/ea			354	495
	Boom Lift (L)	1900.300	1.00 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	5,500	1,250	6,750	6,750
	EQ Equipment Room Masonry 16A03		1.00 LS		1,884		190	5,000		5,500	1,250	13,824	14,672
	MAS Masonry				1,884		190	5,000		5,500	1,250	13,824	14,672
	16 - EQEQUIP EQ Equipment Room				1,884		190	5,000		5,500	1,250	13,824	14,672
	23 - WPS PS West Primary Sludge Pump Station												
	MAS Masonry												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	04000A - West primary Sludge Pump Station 23A03												
	Sub - Masonry Subcontr (3115 sf 4")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Subcontr (1963 sf 12")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Subcontr (280 sf 8")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Unload & Dray CMU Rebar	4000.210	1.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Temp Shore Opening double door	4000.210	1.00 ea	39.25 /mh	628	150.00 /ea	150		/ea			778	1,061
	Temp Shore Opening single door	4000.210	3.00 ea	39.25 /mh	942	100.00 /ea	300		/ea			1,242	1,666
	Temp Shore Opening Louver 4' X 6'	4000.210	2.00 ea	39.25 /mh	471	75.00 /ea	150		/ea			621	833
	Temp Shore Opening Overhead doors	4000.210	1.00 ea	39.25 /mh	1,256	350.00 /ea	350		/ea			1,606	2,171
	West primary Sludge Pump Station 23A03		1.00 LS		4,239		950					5,189	7,097
	MAS Masonry				4,239		950					5,189	7,097
	23 - WPS PS West Primary Sludge Pump Station				4,239		950					5,189	7,097
	24 - EQPS EQ Pump Station												
	MAS Masonry												
	04000A - EQ Pump Station 24A02												
	Sub - Masonry Subcontr (1620 sf 4")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Subcontr (12" 2200 sf)	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Unload & Dray CMU Rebar	4000.210	1.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Temp Shore Opening Double Door	4000.210	1.00 ea	39.25 /mh	628	150.00 /ea	150		/ea			778	1,061
	Temp Shore Opening Louver 3X3	4000.210	2.00 ea	39.25 /mh	314	75.00 /ea	150		/ea			464	605
	Temp Shore Opening 24" pipe sleeve	4000.210	1.00 ea	39.25 /mh	236	200.00 /ea	200		/ea			436	541
	Boom Lift (L)	1900.300	1.00 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	5,500	1,250	6,750	6,750
	EQ Pump Station 24A02		1.00 LS		2,120		500			5,500	1,250	9,370	10,323
	MAS Masonry				2,120		500			5,500	1,250	9,370	10,323
	24 - EQPS EQ Pump Station				2,120		500			5,500	1,250	9,370	10,323
	25 - EQ EQ Basins												
	SITE Sitework												
	04000A - EQ Basin Veneer 25 A01												
	Sub - Masonry Subcontr (10,630 sf)	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Temp Shore Opening small for scupper	4000.210	4.00 ea	39.25 /mh	628	20.00 /ea	80		/ea			708	991
	EQ Basin Veneer 25 A01		1.00 LS		628		80					708	991
	SITE Sitework				628		80					708	991
	25 - EQ EQ Basins				628		80					708	991
	33 - NA North Aeration												
	MAS Masonry												
	04000A - Aeration Masonry Infil 33M02												
	Sub - Masonry Subcontr (2ea penetrations)	4000.980	1.00 ls	/ls		/ls		16,000	/ls			16,000	16,000
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Aeration Masonry Infil 33M02		1.00 LS					16,000				16,000	16,000
	MAS Masonry							16,000				16,000	16,000
	33 - NA North Aeration							16,000				16,000	16,000
	45 - RELEC Reuse Electrical Room												
	MAS Masonry												
	04000A - Reuse Electric Room 45A01												
	Sub - Masonry Subcontr (2887 sf 4")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Subcontr (1938 sf 8")	4000.980	1.00 ls	/ls		/ls			/ls				
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls				
	Unload & Dray CMU Rebar	4000.210	1.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Temp Shore Opening double door	4000.210	1.00 ea	39.25 /mh	628	150.00 /ea	150		/ea			778	1,061
	Temp Shore Opening single door	4000.210	1.00 ea	39.25 /mh	314	100.00 /ea	100		/ea			414	555
	Temp Shore Opening (scuppers and cable trays 2X1	4000.210	6.00 ea	39.25 /mh	942	20.00 /ea	120		/ea			1,062	1,486
	Reuse Electric Room 45A01		1.00 LS		2,826		370					3,196	4,468
	MAS Masonry				2,826		370					3,196	4,468
	45 - RELEC Reuse Electrical Room				2,826		370					3,196	4,468
	042200.00 Concrete Unit Masonry				27,397		22,140	998,000		24,500	22,000	1,094,037	1,106,365
055000.00	Metal Fabrications												
00 - GEN	General												
	ARCH Architectural												
	05 50- Misc Metals Assembly												
	Misc Metals Supply	5000.925	1.00 ls	/ls		407,041.00 /ls	407,041		/ls			407,041	407,041
	Misc Metals Assembly		1.00 ea				407,041					407,041	407,041
	ARCH Architectural						407,041					407,041	407,041

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	00 - GEN General						407,041					407,041	407,041
	00 - SITE Site												
	MET Metals												
	05 50- Misc Metals - Yard Hydrant -												
	Alum Plate for Yard Hydrant - Detail CY721	5001.130	2.00 ea	39.25 /mh	942	200.00 /ea	400		/ea			1,342	1,766
	Alum Hose Rack for Yard Hydrant - Detail MA417	5001.130	2.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Misc Metals - Yard Hydrant -		1.00 ea		1,884		400					2,284	3,132
	05 55- Bollard Takeoff - at Gate Card Readers - 00C12												
	Bollards - 6" x 8'-0"	5001.125	4.00 ea	39.25 /mh	2,512	85.00 /ea	340		/ea			2,852	3,982
	Excavation - Dental	2317.105	24.00 cy	39.25 /mh	314	/cy			/cy			314	455
	Backfill - Dental	2319.302	20.00 cy	39.25 /mh	157	/cy			/cy			157	228
	Formwork Sonotube 18"	3100.112	16.00 lf	39.25 /mh	207	6.50 /lf	109		/lf			316	410
	Truck Place Piers & Columns	3310.270	1.30 cy	39.25 /mh	30	/cy			/cy			30	44
	4000 psi Concrete	3310.100	1.30 cy	/cy		225.00 /cy	313		/cy			313	313
	Finish- Broom	3350.110	7.00 sf	39.25 /mh	41	0.25 /sf	2		/sf			43	62
	Liquid Curing Compounds	3390.170	7.00 sf	39.25 /mh	21	0.50 /sf	4		/sf			24	33
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth					3,800.00 /Mnth	190	100	290	290
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth					400.00 /Mnth	20	5	25	25
	Bollard Takeoff - at Gate Card Readers - 00C12		4.00 EA		3,282		767			210	105	4,365	5,841
	MET Metals				5,166		1,167			210	105	6,649	8,973
	00 - SITE Site				5,166		1,167			210	105	6,649	8,973
	00 - WS Weir Structure												
	ARCH Architectural												
	05 32- Railings Aluminum (Palm)												
	Aluminum 3 Line Rail	5001.115	50.00 lf	39.25 /mh	2,944	0.00 /lf	0		/lf			2,944	4,268
	Coat Aluminum in contact w/ concrete	5001.145	1.00 ls	39.25 /mh		200.00 /ls	200		/ls			200	200
	Railings Aluminum (Palm)		50.00 lf		2,944		200					3,144	4,468
	ARCH Architectural				2,944		200					3,144	4,468
	MET Metals												
	05 02- Struc Steel Beams - SST W10x49 - 00S10												
	Erect SST W10 x 49 - 11'-6"	5120.010	1.00 ea	39.25 /mh	393	/ea			/ea			393	569
	SST Angle 2x2x5/16 x 0'-4" w/Bolts	5124.005	4.00 ea	39.25 /mh	236	0.00 /lbs	0		/mh			236	341
	Anchor Bolts 3/4" w/Expoxy	6090.500	8.00 ea	39.25 /mh	31	15.00 /ea	120		/ea			151	166
	Coat Aluminum in contact w/ concrete	5001.145	6.00 ea	39.25 /mh	59	15.00 /ea	90		/ea			149	175
	Isolation Sleeves & Washers	5001.145	22.00 ea	39.25 /mh	216	20.00 /ea	440		/ea			656	753
	Struc Steel Beams - SST W10x49 - 00S10		1.00 ls		934		650					1,584	2,005
	05 02- Struc Alum Beams - I10x10.3 - 00S10												
	Erect Alum I10x10.3 - 11'-6"	5120.010	4.00 ea	39.25 /mh	471	/ea			/ea			471	683
	Anchor Bolt 5/8" SST Concrete Anchors 4.5" Embedment	5001.064	32.00 ea	39.25 /mh	63	25.00 /ea	800		/ea			863	891
	Coat Aluminum in contact w/ concrete	5001.145	8.00 ea	39.25 /mh	79	15.00 /ea	120		/ea			199	234
	Isolation Sleeves & Washers	5001.145	56.00 ea	39.25 /mh	550	20.00 /ea	1,120		/ea			1,670	1,917
	Struc Alum Beams - I10x10.3 - 00S10		1.00 ls		1,162		2,040					3,202	3,725
	05 02- Struc Alum Beams - I8 x 6.18 - 00S10												
	Erect Alum I8x6.16 - 3'-6"	5120.010	8.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Coat Aluminum in contact w/ concrete	5001.145	16.00 ls	39.25 /mh	157	15.00 /ls	240		/ls			397	468
	Isolation Sleeves & Washers	5001.145	48.00 ea	39.25 /mh	471	20.00 /ea	960		/ea			1,431	1,643
	Struc Alum Beams - I8 x 6.18 - 00S10		1.00 ls		1,256		1,200					2,456	3,021
	05 50- Misc Metals Assembly - Weir Structure - 00S10												
	Checked Plate 3/8" - Alum	5001.122	155.00 sf	39.25 /mh	2,129	0.00 /sf	0		/sf			2,129	3,087
	Alum Grating Angle - with anchors	5001.145	50.00 lf	39.25 /mh	491	8.00 /lf	400		/lf			891	1,111
	Hinged Cover w/EPDM Gasket (1ea 36x36, 2ea 24x36)	5001.110	3.00 ea	39.25 /mh	471	0.00 /ea	0		/ea			471	683
	Misc Metals Assembly - Weir Structure - 00S10		1.00 ea		3,091		400					3,491	4,882
	MET Metals				6,443		4,290					10,733	13,632
	00 - WS Weir Structure				9,387		4,490					13,877	18,101
	05 - GEN 1 Generator 1												
	MET Metals												
	05 55- Bollard Takeoff - at Generator - 00C11 - Not Shown												
	Bollards - 6" x 8'-0"	5001.125	8.00 ea	39.25 /mh	4,710	635.00 /ea	5,080		/ea			9,790	11,910
	Excavation - Dental	2317.105	48.00 cy	39.25 /mh	628	/cy			/cy			628	911
	Backfill - Dental	2319.302	40.00 cy	39.25 /mh	314	/cy			/cy			314	455
	Formwork Sonotube 18"	3100.112	32.00 lf	39.25 /mh	414	6.50 /lf	218		/lf			633	819
	Truck Place Piers & Columns	3310.270	2.56 cy	39.25 /mh	215	/cy			/cy			215	312
	4000 psi Concrete	3310.100	2.56 cy	/cy		225.00 /cy	616		/cy			616	616
	Finish- Broom	3350.110	14.14 sf	39.25 /mh	83	0.25 /sf	4		/sf			87	124
	Liquid Curing Compounds	3390.170	14.14 sf	39.25 /mh	42	0.50 /sf	7		/sf			49	67
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.10 Mnth	/Mnth					3,800.00 /Mnth	380	200	580	580
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth					400.00 /Mnth	40	10	50	50
	Bollard Takeoff - at Generator - 00C11 - Not Shown		8.00 EA		6,406		5,925			420	210	12,962	15,844
	MET Metals				6,406		5,925			420	210	12,962	15,844

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	05 - GEN 1 Generator 1				6,406		5,925			420	210	12,962	15,844
	16 - EQEQUIP EQ Equipment Room												
	MET Metals												
	05 50- Lintels per Detail SF252 - EQ Pump Room - 01A01												
	Lintels - Bent Plate 10.5"x7"x1/2"x 8'-4"	5124.100	1.00 ea	39.25 /mh	314	/lbs			/mh			314	455
	Anchor Bolt 1x10 HDG	5001.061	9.00 ea	39.25 /mh	71	19.72 /ea	177		/ea			248	280
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	9.00 ea	39.25 /mh	707	2.60 /ea	25		/ea			731	1,049
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - EQ Pump Room - 01A01		1.00 ea		1,091		202			50	10	1,353	1,844
	MET Metals				1,091		202			50	10	1,353	1,844
	16 - EQEQUIP EQ Equipment Room				1,091		202			50	10	1,353	1,844
	20 - PC 4 Primary Clarifier 4												
	MET Metals												
	05 50- Misc Metals Assembly - Clarifier 4 - 20S01												
	Checkered Plate 3/8"	5001.122	51.00 sf	39.25 /mh	601	0.00 /sf	0		/sf			601	871
	Alum Grating Angle - Embed	5001.145	42.00 lf	39.25 /mh	412	0.00 /lf	0		/lf			412	598
	Misc Metals Assembly - Clarifier 4 - 20S01		1.00 ea		1,013							1,013	1,468
	05 50- Misc Metals Assembly - Stairs & Handrail - 20S02												
	Aluminum Stairs -	5001.100	4.00 rs	39.25 /mh	471	0.00 /rs	0		/rs			471	683
	Stair Platform	5001.130	1.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Connection to Clarifier	5001.130	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Connection to Concrete Stoop	5001.130	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Aluminum 3 Line Rail at Stair	5001.115	16.00 lf	39.25 /mh	314	0.00 /lf	0		/lf			314	455
	Coat Aluminum in contact w/ concrete	5001.145	4.00 ea	39.25 /mh	157	15.00 /ea	60		/ea			217	288
	Misc Metals Assembly - Stairs & Handrail - 20S02		1.00 ea		1,884		60					1,944	2,792
	MET Metals				2,897		60					2,957	4,260
	20 - PC 4 Primary Clarifier 4				2,897		60					2,957	4,260
	23 - WPS PS West Primary Sludge Pump Station												
	MET Metals												
	05 43- Sump Grating West Primary Sludge - 23S02												
	Alum Floor Grating 2"	5001.120	22.00 sf	39.25 /mh	43	0.00 /sf	0		/sf			43	63
	Alum Grating Support Angle	5001.145	18.00 lf	39.25 /mh	353	10.00 /lf	180		/lf			533	692
	Coat Aluminum in contact w/ concrete	5001.145	1.00 ls	39.25 /mh	39	50.00 /ls	50		/ls			89	107
	Expansion Anchor 5/8 x 3-1/2in SS 304	5001.073	4.00 ea	39.25 /mh	16	15.00 /ea	60		/ea			76	83
	Isolation Sleeves & Washers	5001.145	4.00 ea	39.25 /mh	157	20.00 /ea	80		/ea			237	308
	Sump Grating West Primary Sludge - 23S02		22.00 sf		608		370					978	1,252
	05 50- Misc Metals Assembly - West Primary Sludge - 23S02												
	Aluminum Stairs - Risers	5001.100	30.00 rs	39.25 /mh	2,355	0.00 /rs	0		/rs			2,355	3,415
	Aluminum Stairs - Platforms	5001.100	2.00 ea	39.25 /mh	1,256	0.00 /ea	0		/ea			1,256	1,821
	Aluminum 3 Line Rail at Stair	5001.115	72.00 lf	39.25 /mh	4,239	0.00 /lf	0		/lf			4,239	6,147
	Aluminum Hand Rail 3 Line	5001.115	37.00 lf	39.25 /mh	1,452	0.00 /lf	0		/lf			1,452	2,106
	Ladder - 19'-0"	5001.140	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Access Hatch Bilco JD2AL 48x48	5001.110	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Angle 4 x 4 x 3/8 at Top of CMU Wall	5123.804	55.00 lf	39.25 /mh	2,591	0.00 /lbs	0		/mh			2,591	3,756
	Coat Aluminum in contact w/ concrete	5001.145	12.00 ea	39.25 /mh	118	15.00 /ea	180		/ea			298	351
	Isolation Sleeves & Washers	5001.145	40.00 ea	39.25 /mh	393	20.00 /ea	800		/ea			1,193	1,369
	Field Welding - Stainless	5000.985	32.00 hrs	39.25 /mh	1,256	/hrs		3,520	/hrs			4,776	5,341
	Fire Caulk	7810.100	28.00 lf	39.25 /mh	165	25.00 /lf	700		/lf			865	939
	Misc Metals Assembly - West Primary Sludge - 23S02		1.00 ea		15,708		1,680	3,520				20,908	27,976
	05 50- Lintels per Detail SF252 - West Primary Pump Station - 01A01 - Doors												
	Lintels - Bent Plate 10.5"x7"x3/8"x 5'-0"	5124.100	1.00 ea	39.25 /mh	314	0.00 /lbs	0		/mh			314	455
	Lintels - Bent Plate 10.5"x7"x3/8"x 5'-8"	5124.100	2.00 ea	39.25 /mh	628	/lbs			/mh			628	911
	Lintels - Bent Plate 10.5"x7"x1/2"x 8'-4"	5124.100	1.00 ea	39.25 /mh	628	/lbs			/mh			628	911
	Lintels - Bent Plate 10.5"x7"x1/2"x 14'-0"	5124.100	1.00 ea	39.25 /mh	942	/lbs			/mh			942	1,366
	Jambs - Bent Plate 14.0"x2"x1/2"x 10'-0"	5124.100	2.00 ea	39.25 /mh	1,884	/lbs			/mh			1,884	2,732
	Anchors at Jambs	5001.061	16.00 ea	39.25 /mh	126	19.72 /ea	316		/ea			441	498
	Anchor Bolt 3/4x10 HDG	5001.061	5.00 ea	39.25 /mh	39	16.63 /ea	83		/ea			122	140
	Anchor Bolt 3/4x10 HDG	5001.061	12.00 ea	39.25 /mh	94	16.63 /ea	200		/ea			294	336
	Anchor Bolt 1x10 HDG	5001.061	9.00 ea	39.25 /mh	71	19.72 /ea	177		/ea			248	280
	Anchor Bolt 1x10 HDG	5001.061	12.00 ea	39.25 /mh	94	19.72 /ea	237		/ea			331	373
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	38.00 ea	39.25 /mh	373	2.60 /ea	104		/ea			477	644
	Scaffolding	1900.300	1.00 ls	/ls		/ls			500.00 /ls	500	100	600	600
	Lintels per Detail SF252 - West Primary Pump Station - 01A01 - Doors		1.00 ea		5,193		1,116			500	100	6,909	9,246
	05 50- Lintels per Detail SF252 - West Primary Pump Station - Louvers												
	Lintels - Bent Plate 10.5"x7"x3/8"x 6'-8"	5124.100	2.00 ea	39.25 /mh	942	/lbs			/mh			942	1,366
	Anchor Bolt 3/4x10 HDG	5001.061	12.00 ea	39.25 /mh	94	16.63 /ea	200		/ea			294	336
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	12.00 ea	39.25 /mh	118	2.60 /ea	33		/ea			151	204
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - West Primary Pump Station - Louvers		1.00 ea		1,154		232			50	10	1,446	1,966
	05 50- Hose Rack on 23M04 Note 14 per Detail MA417												
	Hose Rack w/Hose	5001.130	3.00 ea	39.25 /mh	236	200.00 /ea	600		/ea			836	941
	Hose Rack on 23M04 Note 14 per Detail MA417		3.00 ea		236		600					836	941
	05 55- Bollard Takeoff - at Overhead Door - Not Shown												
	Bollards - 6" x 8'-0"	5001.125	2.00 ea	39.25 /mh	1,256	635.00 /ea	1,270		/ea			2,526	3,091

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
05	55- Bollard Takeoff - at Overhead Door - Not Shown												
	Excavation - Dental	2317.105	12.00 cy	39.25 /mh	157	/cy			/cy			157	228
	Backfill - Dental	2319.302	10.00 cy	39.25 /mh	79	/cy			/cy			79	114
	Formwork Sonotube 18"	3100.112	8.00 lf	39.25 /mh	104	/lf	55		/lf			158	205
	Truck Place Piers & Columns	3310.270	0.65 cy	39.25 /mh	15	/cy			/cy			15	22
	4000 psi Concrete	3310.100	0.65 cy	/cy		225.00 /cy	157		/cy			157	157
	Finish- Broom	3350.110	4.00 sf	39.25 /mh	24	/sf	1		/sf			25	35
	Liquid Curing Compounds	3390.170	4.00 sf	39.25 /mh	12	0.50 /sf	2		/sf			14	19
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	190	100	290	290
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			400.00 /Mnth	20	5	25	25
	Bollard Takeoff - at Overhead Door - Not Shown		8.00 EA		1,645		1,484			210	105	3,445	4,185
	MET Metals				24,544		5,483	3,520		760	215	34,522	45,566
	23 - WPS PS West Primary Sludge Pump Station				24,544		5,483	3,520		760	215	34,522	45,566
24	EQPS EQ Pump Station												
	MET Metals												
05	23- Joists and Decking - EQ Pump Station - 24S04												
	Joist LH-Series 24 LH 9	5050.125	186.00 lf	39.25 /mh	2,920	0.00 /lbs	0		/lf			2,920	4,234
	Set Joist Bearing Plates - SM360	4090.130	12.00 ea	39.25 /mh	942	4.00 /ea	48		/ea			990	1,414
	Field Welding - Carbon Steel	5000.985	16.00 hrs	39.25 /mh	628	/hrs		3,600	/hrs			4,228	4,511
	Grout Fill 8" Beam Pocket	4000.112	12.00 cf	39.25 /mh	1,884	115.00 /cf	1,449		/cf			3,333	4,181
	Metal Bridging & Opening Framing	6116.100	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Steel Roof Deck 18 ga. 1-1/2"	5050.210	810.00 sf	39.25 /mh	2,861	0.00 /sf	0		/sf			2,861	4,149
	Field Welding - Puddle Welds @ Decking	5000.985	12.00 hrs	39.25 /mh	471	/hrs		2,700	/hrs			3,171	3,383
	Angle 4 x 3 x 3/8	5123.804	114.00 lf	/lf		0.00 /lbs	0		/lf				
	Epoxy Anchor 3/4 x 6-1/4in SS 304	5001.053	65.00 ea	39.25 /mh	319	15.00 /ea	975		/ea			1,294	1,437
	Angle 1 x 1-1/2 x 3/16 Joist Reinforcement SM802	5123.801	28.00 lf	39.25 /mh	275	0.00 /lbs	0		/mh			275	398
	Field Welding - Carbon Steel	5000.985	7.00 hrs	39.25 /mh	275	/hrs		1,575	/hrs			1,850	1,973
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	4,600.00 /mnth	1,150	450.00 /mnth	113		10,400.00 /mnth	2,600	700	4,563	5,080
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.50 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	750	50	800	800
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.50 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	750	50	800	800
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	1,125	375	1,500	1,500
	Joists and Decking - EQ Pump Station - 24S04		1.00 ls		12,667		2,585	7,875		5,225	1,175	29,526	35,227
05	43- Sump Grating EQ Pump Station - 24S05												
	Alum Floor Grating 2"	5001.120	4.00 sf	39.25 /mh	39	0.00 /sf	0		/sf			39	57
	Alum Grating Angle - Embed	5001.145	8.00 lf	39.25 /mh	79	/lf			/lf			79	114
	Coat Aluminum in contact w/ concrete	5001.145	1.00 ls	39.25 /mh	39	15.00 /ls	15		/ls			54	72
	Isolation Sleeves & Washers	5001.145	4.00 ea	39.25 /mh	157	20.00 /ea	80		/ea			237	308
	Sump Grating EQ Pump Station - 24S05		50.00 sf		314		95					409	550
05	50- Lintels per Detail SF252 - EQ Pump Station - 01A01												
	Lintels - Bent Plate 10.5"x7"x1/2"x 8'-0"	5124.100	1.00 ea	39.25 /mh	628	/lbs			/mh			628	911
	Anchor Bolt 1x10 HDG	5001.061	9.00 ea	39.25 /mh	71	19.72 /ea	177		/ea			248	280
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	9.00 ea	39.25 /mh	353	2.60 /ea	25		/ea			378	537
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - EQ Pump Station - 01A01		1.00 ea		1,052		202			50	10	1,314	1,787
05	50- Lintels per Detail SF252 - EQ Pump Station - 24A04 - Louvers												
	Lintels - Bent Plate 10.5"x7"x3/8"x 5'-4"	5124.100	2.00 ea	39.25 /mh	628	/lbs			/mh			628	911
	Anchor Bolt 3/4x10 HDG	5001.061	10.00 ea	39.25 /mh	79	16.63 /ea	166		/ea			245	280
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	10.00 ea	39.25 /mh	393	2.60 /ea	27		/ea			420	596
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - EQ Pump Station - 24A04 - Louvers		2.00 ea		1,099		194			50	10	1,353	1,847
05	50- Lintels per Detail SF252 - EQ Pump Station - 24A04 - Pipe Pen												
	Lintels - Bent Plate 10.5"x7"x3/8"x 5'-4"	5124.100	1.00 ea	39.25 /mh	314	/lbs			/mh			314	455
	Anchor Bolt 3/4x10 HDG	5001.061	10.00 ea	39.25 /mh	79	16.63 /ea	166		/ea			245	280
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	10.00 ea	39.25 /mh	393	2.60 /ea	27		/ea			420	596
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - EQ Pump Station - 24A04 - Pipe Pen		1.00 ea		785		194			50	10	1,039	1,392
05	50- Hose Rack on 24M01 Note 14 per Detail MA417												
	Hose Rack w/Hose	5001.130	1.00 ea	39.25 /mh	79	200.00 /ea	200		/ea			279	314
	Hose Rack on 24M01 Note 14 per Detail MA417		1.00 ea		79		200					279	314
	MET Metals				15,995		3,469	7,875		5,375	1,205	33,919	41,117
	24 - EQPS EQ Pump Station				15,995		3,469	7,875		5,375	1,205	33,919	41,117
25	EQ EQ Basins												
	MET Metals												
05	43- Sump Grating Equalization Basins - 25S01												
	SS Floor Grating 2"	5001.120	50.00 sf	39.25 /mh	589	0.00 /sf	0		/sf			589	854
	SS Grating Angle - Embed	5001.145	40.00 lf	39.25 /mh	393	0.00 /lf	0		/lf			393	569

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Sump Grating Equalization Basins - 25S01		50.00 sf		981							981	1,423
05	50- Misc Metals Assembly - Equalization Basins - 25S03												
	Aluminum Stairs - Risers	5001.100	29.00 rs	39.25 /mh	2,277	0.00 /rs	0		/rs			2,277	3,301
	Aluminum Stairs - Platforms	5001.100	2.00 ea	39.25 /mh	1,884	0.00 /ea	0		/ea			1,884	2,732
	Aluminum 3 Line Rail at Stair	5001.115	96.00 lf	39.25 /mh	5,652	0.00 /lf	0		/lf			5,652	8,195
	Access Hatch Bilco JD3-48x72	5001.110	2.00 ea	39.25 /mh	1,256	0.00 /ea	0		/ea			1,256	1,821
	Access Hatch Bilco J4 36x36	5001.110	2.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Coat Aluminum in contact w/ concrete	5001.145	12.00 ls	39.25 /mh	118	15.00 /ls	180		/ls			298	351
	Isolation Sleeves & Washers	5001.145	48.00 ls	39.25 /mh	471	20.00 /ls	960		/ls			1,431	1,643
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	4,600.00 /mnth	1,150	450.00 /mnth	113		10,400.00 /mnth	2,600	700	4,563	5,080
	Boom Lift (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	1,375	313	1,688	1,688
	Misc Metals Assembly - Equalization Basins - 25S03		1.00 ea		13,749		1,253			3,975	1,013	19,989	26,176
05	50- Misc Metals Assembly shelf angle for veneer 25S05												
	Angle 5 x 3-1/2 x 3/4 (N&S)	5123.805	350.00 lf	39.25 /mh	13,738	0.00 /lbs	0		/mh			13,738	19,919
	Angle 3-1/2 x 3-1/2 x 3/4 (E&W)	5123.803	208.00 lf	39.25 /mh	8,164	0.00 /lbs	0		/mh			8,164	11,838
	Epoxy Anchor 3/4 x 6-1/4in SS 304	5001.053	279.00 ea	39.25 /mh	2,738	15.00 /ea	4,185		/ea			6,923	8,155
	Coat Aluminum in contact w/ concrete	5001.145	350.00 lf	39.25 /mh	275	1.00 /lf	350		/lf			625	748
	Isolation Sleeves & Washers	5001.145	279.00 ls	39.25 /mh	2,738	20.00 /ls	5,580		/ls			8,318	9,550
	Misc Metals Assembly shelf angle for veneer 25S05		1.00 ea		27,652		10,115					37,767	50,210
05	50- Misc Metals - Davit Crane Base												
	Coat Aluminum in contact w/ concrete	5001.145	4.00 ea	39.25 /mh	157	15.00 /ea	60		/ea			217	288
	Isolation Sleeves & Washers	5001.145	16.00 ea	39.25 /mh	628	20.00 /ea	320		/ea			948	1,231
	Misc Metals - Davit Crane Base		1.00 ea		785		380					1,165	1,518
	MET Metals				43,167		11,748			3,975	1,013	59,902	79,327
	25 - EQ EQ Basins				43,167		11,748			3,975	1,013	59,902	79,327
25	EQRW EQ Return Valve Vault												
	MET Metals												
05	43- Sump Grating EQ Return Valve Vault - 25S05												
	SS Floor Grating 2"	5001.120	4.00 sf	39.25 /mh	157	0.00 /sf	0		/sf			157	228
	SS Grating Angle - Embed	5001.145	8.00 lf	39.25 /mh	157	0.00 /lf	0		/lf			157	228
	Sump Grating EQ Return Valve Vault - 25S05		4.00 sf		314							314	455
05	50- Misc Metals Assembly - EQ Return Valve Vault - 25S05												
	Ladder SST - 9'-0"	5001.140	1.00 ea	39.25 /mh	471	0.00 /ea	0		/ea			471	683
	Access Hatch Bilco J4 36x36 - H20 Rated w/Ladder Up	5001.110	2.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Alum Embed Angle at Removeable Tread Plate	5001.145	54.00 lf	39.25 /mh	530	/lf			/lf			530	768
	Removeable Tread Plate 6'-6"x7'-0"	5001.122	2.00 ea	39.25 /mh	1,256	0.00 /ea	0		/ea			1,256	1,821
	Neoprene Gasket	5001.145	2.00 ea	39.25 /mh	314	0.00 /ea	0		/ea			314	455
	Coat Aluminum in contact w/ concrete	5001.145	4.00 ea	39.25 /mh	157	500.00 /ea	2,000		/ea			2,157	2,228
	Misc Metals Assembly - EQ Return Valve Vault - 25S05		1.00 ea		3,356		2,000					5,356	6,866
	MET Metals				3,670		2,000					5,670	7,321
	25 - EQRW EQ Return Valve Vault				3,670		2,000					5,670	7,321
27	ODOR Odor Control												
	MET Metals												
05	43- Tread Plate Cover Liquid Stream Odor Control Bldg - 27S01												
	Tread Plate 1/2" SS	5001.122	9.00 sf	39.25 /mh	177	/sf			/sf			177	256
	SS Grating Angle - Embed	5001.145	12.00 lf	39.25 /mh	471	0.00 /lf	0		/lf			471	683
	Tread Plate Cover Liquid Stream Odor Control Bldg - 27S01		9.00 sf		648							648	939
	MET Metals				648							648	939
	27 - ODOR Odor Control				648							648	939
33	NA North Aeration												
	MET Metals												
05	50- Misc Metals - North Aeration Complex												
	33M05 Note 1 - New Crane Stops	5001.130	2.00 ea	39.25 /mh	314	1,000.00 /ea	2,000		/ea			2,314	2,455
	Field Welding - Carbon Steel	5000.985	4.00 hrs	39.25 /mh	157	/hrs		900	/hrs			1,057	1,128
	Boom Lift (L)	1900.300	0.05 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	275	63	338	338
	Misc Metals - North Aeration Complex		1.00 ea		471		2,000	900		275	63	3,709	3,920
	MET Metals				471		2,000	900		275	63	3,709	3,920
	33 - NA North Aeration				471		2,000	900		275	63	3,709	3,920
36	SC 3&4 Secondary Clarifiers #3 and #4												
	MET Metals												
05	50- Misc Metals - Stairs SC-4 Note 2 on 36M04												
	Steel Stairs -	5001.100	4.00 rs	39.25 /mh	942	0.00 /rs	0		/rs			942	1,366
	Anchors for Stairs	5001.100	16.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Grout Stairs	5001.100	2.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Steel Pipe Rail 3 Line at Stair	5001.115	10.00 lf	39.25 /mh	589	0.00 /lf	0		/lf			589	854
	Coat Aluminum in contact w/ concrete	5001.145	2.00 ea	39.25 /mh	20	15.00 /ea	30		/ea			50	58
	Isolation Sleeves & Washers	5001.145	16.00 ea	39.25 /mh	157	20.00 /ea	320		/ea			477	548
	Misc Metals - Stairs SC-4 Note 2 on 36M04		1.00 ea		1,864		350					2,214	3,053
	MET Metals				1,864		350					2,214	3,053

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	36 - SC 3&4 Secondary Clarifiers #3 and #4				1,864		350					2,214	3,053
	45 - RELEC Reuse Electrical Room												
	MET Metals												
	05 50- Lintels per Detail SF252 - Reuse Pump Station Electrical Room - 01A01												
	Lintels - Bent Plate 10.5"x7"x3/8"x 5'-0"	5124.100	1.00 ea	39.25 /mh	314	/lbs			/mh			314	455
	Lintels - Bent Plate 10.5"x7"x1/2"x 8'-4"	5124.100	1.00 ea	39.25 /mh	628	/lbs			/mh			628	911
	Anchor Bolt 3/4x10 HDG	5001.061	5.00 ea	39.25 /mh	39	16.63 /ea	83		/ea			122	140
	Anchor Bolt 1x10 HDG	5001.061	9.00 ea	39.25 /mh	71	19.72 /ea	177		/ea			248	280
	Cut & Grout Fill 8" Block for Lintel Anchors	4070.116	14.00 ea	39.25 /mh	550	2.60 /ea	38		/ea			588	835
	Scaffolding	1900.300	0.10 ls	/ls		/ls			500.00 /ls	50	10	60	60
	Lintels per Detail SF252 - Reuse Pump Station Electrical Room - 01A01		1.00 ea		1,601		299			50	10	1,960	2,681
	MET Metals				1,601		299			50	10	1,960	2,681
	45 - RELEC Reuse Electrical Room				1,601		299			50	10	1,960	2,681
	055000.00 Metal Fabrications				116,908		444,233	12,295		11,115	2,830	587,381	639,989
061000.00	Rough Carpentry												
	16 - EQEQUIP EQ Equipment Room												
	ARCH Architectural												
	0600 2- Rough Carpentry - EQ Equipment Room - 16A04												
	2x4 at Roof Perimeter	6116.140	382.00 lf	39.25 /mh	750	0.68 /lf	286		/lf			1,035	1,373
	3/4" Plywood CDX at Parapet Coping	6160.500	105.00 sf	39.25 /mh	412	1.25 /sf	197		/sf			609	794
	Bolt Connectors 3/8" at Parapet Coping	6090.700	26.00 ea	39.25 /mh	153	10.00 /ea	286		/mh			439	508
	2x 4 Beveled at Parapet Coping	6116.200	86.00 lf	39.25 /mh	422	0.68 /lf	64		/lf			486	676
	Blocking 2x4 at Scuppers	6116.120	8.00 lf	39.25 /mh	10	0.68 /lf	6		/lf			16	20
	Nails	6090.500	5.00 lb	/lb		5.00 /lbs	28		/lb			28	28
	Rough Carpentry - EQ Equipment Room - 16A04		86.00 lf		1,747		866					2,613	3,399
	ARCH Architectural				1,747		866					2,613	3,399
	16 - EQEQUIP EQ Equipment Room				1,747		866					2,613	3,399
23 - WPS	PS West Primary Sludge Pump Station												
	ARCH Architectural												
	0600 2- Rough Carpentry - West Primary Sludge - 23A07												
	2x4 at Roof Perimeter	6116.140	890.00 lf	39.25 /mh	1,747	0.68 /lf	666		/lf			2,412	3,198
	3/4" Plywood CDX at Parapet Coping	6160.500	444.00 sf	39.25 /mh	1,743	1.25 /sf	833		/sf			2,575	3,359
	Bolt Connectors 3/8" at Parapet Coping	6090.700	48.00 ea	39.25 /mh	283	10.00 /ea	528		/mh			811	938
	2x 4 Beveled at Parapet Coping	6116.200	178.00 lf	39.25 /mh	873	0.68 /lf	133		/lf			1,006	1,399
	Blocking 2x4 at Roof Penetrations	6116.120	294.00 lf	39.25 /mh	358	0.68 /lf	220		/lf			578	739
	Nails	6090.500	10.00 lb	/lb		5.00 /lbs	55		/lb			55	55
	Rough Carpentry - West Primary Sludge - 23A07		178.00 lf		5,003		2,434					7,437	9,689
	ARCH Architectural				5,003		2,434					7,437	9,689
	23 - WPS PS West Primary Sludge Pump Station				5,003		2,434					7,437	9,689
24 - EQPS	EQ Pump Station												
	ARCH Architectural												
	0600 2- Rough Carpentry - EQ Pump Station - 24A03												
	2x4 at Roof Perimeter	6116.140	600.00 lf	39.25 /mh	1,178	0.68 /lf	449		/lf			1,626	2,156
	3/4" Plywood CDX at Parapet Coping	6160.500	202.00 sf	39.25 /mh	793	1.25 /sf	379		/sf			1,172	1,528
	Bolt Connectors 3/8" at Parapet Coping	6090.700	34.00 ea	39.25 /mh	200	10.00 /ea	374		/mh			574	664
	2x 4 Beveled at Parapet Coping	6116.200	120.00 lf	39.25 /mh	589	0.68 /lf	90		/lf			679	943
	Blocking 2x4 at Scuppers & Roof Penetrations	6116.120	56.00 lf	39.25 /mh	68	0.68 /lf	42		/lf			110	141
	Nails	6090.500	5.00 lb	/lb		5.00 /lbs	28		/lb			28	28
	Rough Carpentry - EQ Pump Station - 24A03		120.00 lf		2,827		1,361					4,188	5,460
	ARCH Architectural				2,827		1,361					4,188	5,460
	24 - EQPS EQ Pump Station				2,827		1,361					4,188	5,460
25 - EQ	EQ Basins												
	ARCH Architectural												
	0600 2- Rough Carpentry - EQ Basins - 25A03												
	3/4" Plywood CDX at Parapet Coping	6160.500	634.00 sf	39.25 /mh	2,488	1.25 /sf	1,189		/sf			3,677	4,797
	Bolt Connectors 3/8" at Parapet Coping	6090.700	142.00 ea	39.25 /mh	836	10.00 /ea	1,562		/mh			2,398	2,774
	2x 4 Beveled at Parapet Coping	6116.200	552.00 lf	39.25 /mh	2,708	0.68 /lf	413		/lf			3,121	4,340
	Nails	6090.500	15.00 lb	/lb		5.00 /lbs	83		/lb			83	83
	Rough Carpentry - EQ Basins - 25A03		552.00 lf		6,033		3,246					9,279	11,994
	ARCH Architectural				6,033		3,246					9,279	11,994
	25 - EQ EQ Basins				6,033		3,246					9,279	11,994
45 - RELEC	Reuse Electrical Room												
	ARCH Architectural												
	0600 2- Rough Carpentry - Reuse Electrical Room - 45A02												
	2x4 at Roof Perimeter	6116.140	600.00 lf	39.25 /mh	1,178	0.68 /lf	449		/lf			1,626	2,156
	3/4" Plywood CDX at Parapet Coping	6160.500	322.00 sf	39.25 /mh	1,264	1.25 /sf	604		/sf			1,868	2,436
	Bolt Connectors 3/8" at Parapet Coping	6090.700	42.00 ea	39.25 /mh	247	10.00 /ea	462		/mh			709	821
	2x 4 Beveled at Parapet Coping	6116.200	150.00 lf	39.25 /mh	736	0.68 /lf	112		/lf			848	1,179
	Blocking 2x4 at Scuppers & Roof Penetrations	6116.120	300.00 lf	39.25 /mh	365	0.68 /lf	224		/lf			589	754
	Nails	6090.500	10.00 lb	/lb		5.00 /lbs	55		/lb			55	55
	Rough Carpentry - Reuse Electrical Room - 45A02		150.00 lf		3,790		1,906					5,696	7,401

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	ARCH Architectural				3,790		1,906					5,696	7,401
	45 - RELEC Reuse Electrical Room				3,790		1,906					5,696	7,401
	061000.00 Rough Carpentry				19,399		9,814					29,213	37,943
068015.00	FRP												
	24 - EQPS EQ Pump Station												
	ARCH Architectural												
	05 50- Structural FRP - EQ Pump Station - 24A03												
	Supply FRP Package	5001.155	1.00 ls	39.25 /mh		5,000.00 /ls	5,000		/ls			5,000	5,000
	FRP Special - Parapet Ladder	5001.155	1.00 ea	39.25 /mh	785	/ea			/ea			785	1,138
	Anchor Bolt 1/2x6 SS 304	5001.063	12.00 ea	39.25 /mh	94	25.00 /ea	300		/ea			394	437
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.05 mnth	4,600.00 /mnth	230	450.00 /mnth	23		10,400.00 /mnth	520	140	913	1,016
	Structural FRP - EQ Pump Station - 24A03		1.00 ea		1,109		5,323			520	140	7,092	7,591
	05 50- FRP Cover System - EQ Pump Station - 24S03												
	Supply FRP Package	5001.155	1.00 ls	39.25 /mh		48,500.00 /ls	48,500		/ls			48,500	48,500
	FRP Grating angle	5001.155	80.00 lf	39.25 /mh	1,099	/lf			/lf			1,099	1,594
	FRP Special - Support Beams	5001.155	1.00 ls	39.25 /mh	3,140	/ls			/ls			3,140	4,553
	Anchor Bolt 1/2x6 SS 304	5001.063	180.00 ea	39.25 /mh	883	25.00 /ea	4,500		/ea			5,383	5,781
	FRP Cover	5001.155	288.00 sf	39.25 /mh	226	/sf			/mh			226	328
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.15 mnth	4,600.00 /mnth	690	450.00 /mnth	68		10,400.00 /mnth	1,560	420	2,738	3,048
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.15 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	675	225	900	900
	FRP Cover System - EQ Pump Station - 24S03		1.00 ea		6,038		53,068			2,235	645	61,986	64,703
	ARCH Architectural				7,147		58,390			2,755	785	69,077	72,294
	24 - EQPS EQ Pump Station				7,147		58,390			2,755	785	69,077	72,294
	27 - ODOR Odor Control												
	ARCH Architectural												
	05 50- FRP Cover System - Biofilter - 27M03												
	Supply FRP Package	5001.155	1.00 ls	39.25 /mh		0.00 /ls	0		/ls				
	FRP Grating Angle	5001.155	104.00 lf	39.25 /mh	1,633	/lf			/lf			1,633	2,368
	FRP Special - Support Beams	5001.155	1.00 ls	39.25 /mh	7,850	/ls			/ls			7,850	11,383
	Anchor Bolt 1/2x6 SS 304	5001.063	268.00 ea	39.25 /mh	1,315	25.00 /ea	6,700		/ea			8,015	8,607
	FRP Cover	5001.155	660.00 sf	39.25 /mh	518	/sf			/mh			518	751
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.15 mnth	4,600.00 /mnth	690	450.00 /mnth	68		10,400.00 /mnth	1,560	420	2,738	3,048
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.15 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	675	225	900	900
	FRP Cover System - Biofilter - 27M03		1.00 ea		12,006		6,768			2,235	645	21,653	27,056
	ARCH Architectural				12,006		6,768			2,235	645	21,653	27,056
	27 - ODOR Odor Control				12,006		6,768			2,235	645	21,653	27,056
	45 - RPUMP Reuse Pump Station												
	ARCH Architectural												
	05 50- Structural FRP - Reuse Pump Station - 45A05												
	Supply FRP Package	5001.155	1.00 ls	39.25 /mh		7,641.00 /ls	7,641		/ls			7,641	7,641
	FRP Special - Parapet Ladder	5001.155	1.00 ea	39.25 /mh	1,178	/ea			/ea			1,178	1,707
	Anchor Bolt 1/2x6 SS 304 w/Compression Sleeves	5001.063	24.00 ea	39.25 /mh	942	50.00 /ea	1,200		/ea			2,142	2,566
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.05 mnth	4,600.00 /mnth	230	450.00 /mnth	23		10,400.00 /mnth	520	140	913	1,016
	Structural FRP - Reuse Pump Station - 45A05		1.00 ea		2,350		8,864			520	140	11,873	12,930
	ARCH Architectural				2,350		8,864			520	140	11,873	12,930
	45 - RPUMP Reuse Pump Station				2,350		8,864			520	140	11,873	12,930
	068015.00 FRP				21,503		74,021			5,510	1,570	102,604	112,280
071100.00	Dampproofing												
	16 - EQEQUIP EQ Equipment Room												
	ARCH Architectural												
	07 6- Dampproofing - Below Grade EQ Equipment Room - 16A03												
	Brush on Bituminous	7110.100	254.00 sf	39.25 /mh	199	1.00 /sf	272		/sf			471	561
	Dampproofing - Below Grade EQ Equipment Room - 16A03		254.00 sf		199		272					471	561
	ARCH Architectural				199		272					471	561
	16 - EQEQUIP EQ Equipment Room				199		272					471	561
	23 - WPS PS West Primary Sludge Pump Station												
	ARCH Architectural												
	07 6- Dampproofing - Below Grade West Primary Sludge PS - 23S02												
	Brush on Bituminous	7110.100	1,921.00 sf	39.25 /mh	1,508	1.00 /sf	2,055		/sf			3,563	4,242
	Dampproofing - Below Grade West Primary Sludge PS - 23S02		1,921.00 sf		1,508		2,055					3,563	4,242
	ARCH Architectural				1,508		2,055					3,563	4,242
	23 - WPS PS West Primary Sludge Pump Station				1,508		2,055					3,563	4,242
	45 - RELEC Reuse Electrical Room												
	ARCH Architectural												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
07	6- Dampproofing - Below Grade West Primary Sludge PS - 45A06												
	Brush on Bituminous	7110.100	456.00 sf	39.25 /mh	358	1.00 /sf	488		/sf			846	1,007
	Dampproofing - Below Grade West Primary Sludge PS - 45A06		456.00 sf		358		488					846	1,007
	ARCH Architectural				358		488					846	1,007
	45 - RELEC Reuse Electrical Room				358		488					846	1,007
	071100.00 Damproofing				2,065		2,815					4,881	5,810
072100.00	Thermal Insulation												
	16 - EQEQUIP EQ Equipment Room												
	ARCH Architectural												
07	6- Insulation - Rigid 3" XPS Insul R-15 - 16A04												
	Rigid Insulation 3.0 " @ Wall	7210.400	1,040.00 sf	39.25 /mh		0.00 /sf	0		/sf				
	Rigid Wall Insulation Adhesive	7210.400	1,040.00 sf	/sf		0.00 /sf	0		/sf				
	Boom Lift (L)	1900.300	0.05 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	275	0	275	275
	Insulation - Rigid 3" XPS Insul R-15 - 16A04		1,040.00 sf							275		275	275
07	6- Insulation - Rigid Below Grade 2" West Primary Sludge - 16A03												
	Rigid Insulation 2.0 " @ Wall - Pump Room	7210.400	254.00 sf	39.25 /mh	299	2.40 /sf	652		/sf			951	1,086
	Rigid Wall Insulation Adhesive	7210.400	254.00 sf	/sf		0.10 /sf	25		/sf			25	25
	Insulation - Rigid Below Grade 2" West Primary Sludge - 16A03		254.00 sf		299		678					977	1,111
	ARCH Architectural				299		678			275		1,252	1,386
	16 - EQEQUIP EQ Equipment Room				299		678			275		1,252	1,386
23 - WPS	PS West Primary Sludge Pump Station												
	ARCH Architectural												
07	6- Insulation - Rigid 3" XPS Insul R-15 - 23A07												
	Rigid Insulation 3.0 " @ Wall	7210.400	3,065.00 sf	39.25 /mh		0.00 /sf	0		/sf				
	Rigid Wall Insulation Adhesive	7210.400	3,065.00 sf	/sf		0.00 /sf	0		/sf				
	Boom Lift (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	1,375	0	1,375	1,375
	Insulation - Rigid 3" XPS Insul R-15 - 23A07		3,065.00 sf							1,375		1,375	1,375
07	6- Insulation - Rigid Below Grade 2" West Primary Sludge - 23A07												
	Rigid Insulation 2.0 " @ Wall - Pump Room	7210.400	1,785.00 sf	39.25 /mh	2,102	2.40 /sf	4,584		/sf			6,686	7,632
	Rigid Wall Insulation Adhesive	7210.400	1,785.00 sf	/sf		0.10 /sf	179		/sf			179	179
	Insulation - Rigid Below Grade 2" West Primary Sludge - 23A07		1,785.00 sf		2,102		4,762					6,864	7,810
07	6- Insulation - Rigid Below Grade 2" West Primary Sludge - 23A07												
	Rigid Insulation 2.0 " @ Wall - Electrical Room	7210.400	136.00 sf	39.25 /mh	160	2.40 /sf	349		/sf			509	581
	Rigid Wall Insulation Adhesive	7210.400	136.00 sf	/sf		0.10 /sf	14		/sf			14	14
	Insulation - Rigid Below Grade 2" West Primary Sludge - 23A07		136.00 sf		160		363					523	595
	ARCH Architectural				2,262		5,125			1,375		8,762	9,780
	23 - WPS PS West Primary Sludge Pump Station				2,262		5,125			1,375		8,762	9,780
24 - EQPS	EQ Pump Station												
	ARCH Architectural												
07	6- Insulation - Rigid 3" XPS Insul R-15 - 23A07												
	Rigid Insulation 3.0 " @ Wall	7210.400	1,588.00 sf	39.25 /mh		0.00 /sf	0		/sf				
	Rigid Wall Insulation Adhesive	7210.400	1,588.00 sf	/sf		0.00 /sf	0		/sf				
	Boom Lift (L)	1900.300	0.15 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	825	0	825	825
	Insulation - Rigid 3" XPS Insul R-15 - 23A07		1,588.00 sf							825		825	825
	ARCH Architectural									825		825	825
	24 - EQPS EQ Pump Station									825		825	825
45 - RELEC	Reuse Electrical Room												
	ARCH Architectural												
07	6- Insulation - Rigid 3" XPS Insul R-15 - 45A06												
	Rigid Insulation 3.0 " @ Wall	7210.400	2,853.00 sf	39.25 /mh		0.00 /sf	0		/sf				
	Rigid Wall Insulation Adhesive	7210.400	2,853.00 sf	/sf		0.00 /sf	0		/sf				
	Boom Lift (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	1,375	0	1,375	1,375
	Insulation - Rigid 3" XPS Insul R-15 - 45A06		2,853.00 sf							1,375		1,375	1,375
07	6- Insulation - Rigid Below Grade 2" 45A06												
	Rigid Insulation 2.0 " @ Footing	7210.400	456.00 sf	39.25 /mh	537	2.40 /sf	1,171		/sf			1,708	1,950
	Rigid Wall Insulation Adhesive	7210.400	456.00 sf	/sf		0.10 /sf	46		/sf			46	46
	Insulation - Rigid Below Grade 2" 45A06		456.00 sf		537		1,217					1,754	1,995
	ARCH Architectural				537		1,217			1,375		3,129	3,370
	45 - RELEC Reuse Electrical Room				537		1,217			1,375		3,129	3,370
	072100.00 Thermal Insulation				3,098		7,020			3,850		13,968	15,362
075323.00	EPDM Roofing												
	16 - EQEQUIP EQ Equipment Room												
	ARCH Architectural												
	0730- Roofing & Flashing - EPDM - EQ Equipment Room - 16A02												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0730- Roofing & Flashing - EPDM - EQ Equipment Room - 16A02												
	Sub - Roofing	7530.100	1.00 ls	/ls		/ls		25,760	/ls			25,760	25,760
	Sub - Roofing - Bond	7530.100	1.00 ls	/ls		/ls		464	/ls			464	464
	Membrane Roofing Adhered	7530.100	384.04 sf	/sf		/sf		0	/sf				
	Parapet Coping	7620.100	84.00 lf	39.25 /mh		1.00 /lf	90		/lf			90	90
	Splash Blocks	3450.110	1.00 ea	39.25 /mh	39	125.00 /ea	125		/mh			164	182
	Roofing & Flashing - EPDM - EQ Equipment Room - 16A02		384.04 sf		39		215	26,224				26,478	26,496
	ARCH Architectural				39		215	26,224				26,478	26,496
	16 - EQEQUIP EQ Equipment Room				39		215	26,224				26,478	26,496
	23 - WPS PS West Primary Sludge Pump Station												
	ARCH Architectural												
	0730- Roofing & Flashing - EPDM - West Primary Sludge - 23A04												
	Sub - Roofing	7530.100	1.00 ls	/ls		/ls		98,236	/ls			98,236	98,236
	Sub - Roofing - Bond	7530.100	1.00 ls	/ls		/ls		1,769	/ls			1,769	1,769
	Membrane Roofing Adhered	7530.100	1,542.00 sf	/sf		/sf		0	/sf				
	Parapet Coping	7620.100	134.00 lf	39.25 /mh		1.00 /lf	143		/lf			143	143
	Roofing & Flashing - EPDM - West Primary Sludge - 23A04		1,542.00 sf				143	100,005				100,148	100,148
	ARCH Architectural						143	100,005				100,148	100,148
	23 - WPS PS West Primary Sludge Pump Station						143	100,005				100,148	100,148
	24 - EQPS EQ Pump Station												
	ARCH Architectural												
	0730- Roofing & Flashing - EPDM - EQ Pump Station - 24A03												
	Sub - Roofing	7530.100	1.00 ls	/ls		/ls		38,485	/ls			38,485	38,485
	Sub - Roofing - Bond	7530.100	1.00 ls	/ls		/ls		693	/ls			693	693
	Membrane Roofing Adhered	7530.100	810.00 sf	/sf		/sf		0	/sf				
	Parapet Coping	7620.100	121.00 lf	39.25 /mh		1.00 /lf	129		/lf			129	129
	Splash Blocks	3450.110	1.00 ea	39.25 /mh	39	125.00 /ea	125		/mh			164	182
	Roofing & Flashing - EPDM - EQ Pump Station - 24A03		810.00 sf		39		254	39,178				39,472	39,489
	ARCH Architectural				39		254	39,178				39,472	39,489
	24 - EQPS EQ Pump Station				39		254	39,178				39,472	39,489
	25 - EQ EQ Basins												
	ARCH Architectural												
	0730- EQ Basin												
	Sub - Membrane Roofing	7530.100	1.00 ls	/ls		/ls		21,473	/ls			21,473	21,473
	Sub - Roofing Bond	7530.100	1.00 ls	/ls		/ls		389	/ls			389	389
	Wood	3450.110	2.00 ea	39.25 /mh		600.00 /ea	1,200		/mh			1,200	1,200
	EQ Basin						1,200	21,862				23,062	23,062
	ARCH Architectural						1,200	21,862				23,062	23,062
	25 - EQ EQ Basins						1,200	21,862				23,062	23,062
	33 - NA North Aeration												
	ARCH Architectural												
	0730- Roofing & Flashing - EPDM - NA Complex - 33M04 Note 10												
	Sub - Roofing	7530.100	1.00 ls	/ls		/ls		10,000	/ls			10,000	10,000
	Sub - Roofing - Bond	7530.100	1.00 ls	/ls		/ls		288	/ls			288	288
	Patch Membrane Small Openings	7590.100	4.00 ea	/ea		/ea		6,000	/ea			6,000	6,000
	Roofing & Flashing - EPDM - NA Complex - 33M04 Note 10		1.00 ls					16,288				16,288	16,288
	ARCH Architectural							16,288				16,288	16,288
	33 - NA North Aeration							16,288				16,288	16,288
	45 - RELEC Reuse Electrical Room												
	ARCH Architectural												
	0730- Roofing & Flashing - EPDM - Reuse Electrical Room - 45A02												
	Sub - Roofing	7530.100	1.00 ls	/ls		/ls		77,515	/ls			77,515	77,515
	Sub - Roofing - Bond	7530.100	1.00 ls	/ls		/ls		1,396	/ls			1,396	1,396
	Membrane Roofing Adhered	7530.100	703.99 sf	/sf		/sf		0	/sf				
	Parapet Coping	7620.100	188.00 lf	39.25 /mh		1.00 /lf	201		/lf			201	201
	Splash Blocks	3450.110	2.00 ea	39.25 /mh	79	125.00 /ea	250		/mh			329	364
	Roofing & Flashing - EPDM - Reuse Electrical Room - 45A02		703.99 sf		79		451	78,911				79,441	79,476
	ARCH Architectural				79		451	78,911				79,441	79,476
	45 - RELEC Reuse Electrical Room				79		451	78,911				79,441	79,476
	075323.00 EPDM Roofing				157		2,264	282,468				284,889	284,960
079200.00	Joint Sealants												
	16 - EQEQUIP EQ Equipment Room												
	ARCH Architectural												
	0760- Caulking - Door Schedule - 01A01												
	Caulking Doors - 161A	7920.200	48.00 lf	39.25 /mh	188	3.00 /lf	154		/lf			342	427
	Caulking - Door Schedule - 01A01		100.00 lf		188		154					342	427

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0760- Caulking - Expansion Joints at CMU - 16A02												
	Expansion Joint - 1" Wide - Detail 3	7920.200	36.00 If	39.25 /mh	707	75.00 /lf	2,889		/lf			3,596	3,913
	Expansion Joint - Expansion Bellow Detail 4	7920.200	22.00 If	39.25 /mh	432	100.00 /lf	2,354		/lf			2,786	2,980
	Expansion Joint - 1" Wide - Section B 16A04	7920.200	22.00 If	39.25 /mh	432	75.00 /lf	1,766		/lf			2,197	2,392
	Caulking - Expansion Joints at CMU - 16A02		1.00 If		1,570		7,009					8,579	9,285
	0760- Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02												
	Misc Materials	7920.300	1.00 Is	/ls		500.00 /ls	500		/ls			500	500
	Compressible Filler - Control Joint 8"	4090.180	70.00 If	39.25 /mh		25.00 /lf	1,750		/lf			1,750	1,750
	Compressible Filler - Expansion Joint 12"	4090.180	70.00 If	39.25 /mh		75.00 /lf	5,250		/lf			5,250	5,250
	Caulking - CMU Joints	7920.100	280.00 If	39.25 /mh	1,099	4.00 /lf	1,198		/lf			2,297	2,792
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.10 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	150	10	160	160
	Boom Lift (L)	1900.300	0.10 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	550	125	675	675
	Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02		1.00 If		1,099		8,698			700	135	10,632	11,127
	0760- Caulking - Misc - 16A02												
	Caulking - Roofing	7920.100	172.00 If	39.25 /mh	675	2.00 /lf	368		/lf			1,043	1,347
	Caulking - Louvers	7920.200	0.01 If	39.25 /mh	0	3.00 /lf	0	0	0.00 /lf	0	0	0	0
	Caulking - HVAC Penetrations	7920.100	0.01 If	39.25 /mh	0	2.00 /lf	0	0	0.00 /lf	0	0	0	0
	Caulking - Electrical Penetrations	7920.100	4.00 ea	39.25 /mh	157	2.00 /ea	9		/ea			166	236
	Caulking - Process Penetrations	7920.100	4.00 ea	39.25 /mh	157	2.00 /ea	9		/ea			166	236
	Caulking - Misc - 16A02		1.00 If		989		385					1,374	1,820
	ARCH Architectural				3,847		16,246			700	135	20,928	22,659
	16 - EQEQUIP EQ Equipment Room				3,847		16,246			700	135	20,928	22,659
	23 - WPS PS West Primary Sludge Pump Station												
	ARCH Architectural												
	0760- Caulking - Door Schedule - 01A01												
	Caulking Doors - 231A	7920.200	40.00 If	39.25 /mh	157	3.00 /lf	128		/lf			285	356
	Caulking Doors - 231B	7920.200	64.00 If	39.25 /mh	251	3.00 /lf	205		/lf			457	570
	Caulking Doors - 231C	7920.200	37.00 If	39.25 /mh	145	3.00 /lf	119		/lf			264	329
	Caulking Doors - 232A	7920.200	40.00 If	39.25 /mh	157	3.00 /lf	128		/lf			285	356
	Caulking Doors - 232B	7920.200	48.00 If	39.25 /mh	188	3.00 /lf	154		/lf			342	427
	Caulking - Door Schedule - 01A01		100.00 If		899		735					1,634	2,038
	0760- Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02												
	Misc Materials	7920.300	1.00 Is	/ls		500.00 /ls	500		/ls			500	500
	Compressible Filler - Control Joint 8"	4090.180	70.00 If	39.25 /mh		25.00 /lf	1,750		/lf			1,750	1,750
	Compressible Filler - Expansion Joint 12"	4090.180	75.00 If	39.25 /mh		75.00 /lf	5,625		/lf			5,625	5,625
	Caulking - CMU Joints	7920.100	150.00 If	39.25 /mh	589	4.00 /lf	642		/lf			1,231	1,496
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.10 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	150	10	160	160
	Boom Lift (L)	1900.300	0.10 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	550	125	675	675
	Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02		1.00 If		589		8,517			700	135	9,941	10,206
	0760- Caulking - Misc - 23A04												
	Caulking - Roofing	7920.100	364.00 If	39.25 /mh	1,429	2.00 /lf	779		/lf			2,208	2,851
	Caulking - Louvers	7920.200	92.00 If	39.25 /mh	361	3.00 /lf	295		/lf			656	819
	Caulking - HVAC Penetrations	7920.100	66.00 If	39.25 /mh	518	2.00 /lf	141		/lf			659	892
	Caulking - Electrical Penetrations	7920.100	20.00 If	39.25 /mh	157	2.00 /lf	43		/lf			200	270
	Caulking - Misc - 23A04		1.00 If		2,465		1,258					3,723	4,832
	ARCH Architectural				3,952		10,510			700	135	15,298	17,076
	23 - WPS PS West Primary Sludge Pump Station				3,952		10,510			700	135	15,298	17,076
	24 - EQPS EQ Pump Station												
	ARCH Architectural												
	0760- Caulking - Door Schedule - 01A01												
	Caulking Doors - 240A	7920.200	46.00 If	39.25 /mh	181	3.00 /lf	148		/lf			328	409
	Caulking - Door Schedule - 01A01		100.00 If		181		148					328	409
	0760- Caulking - Expansion Joints at CMU - 24A04												
	Expansion Joint - 1" Wide - Detail 3	7920.200	41.00 If	39.25 /mh	805	75.00 /lf	3,290		/lf			4,095	4,457
	Expansion Joint - Expansion Bellow Detail 4	7920.200	31.00 If	39.25 /mh	608	100.00 /lf	3,317		/lf			3,925	4,199
	Caulking - Expansion Joints at CMU - 24A04		1.00 If		1,413		6,607					8,020	8,656
	0760- Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02												
	Misc Materials	7920.300	1.00 Is	0.00 /ls	0	500.00 /ls	500	0	0.00 /ls	0	0	500	500
	Compressible Filler - Control Joint 4"	4090.180	0.00 If	39.25 /mh	0	25.00 /lf	0	0	0.00 /lf	0	0	0	0
	Compressible Filler - Expansion Joint 12"	4090.180	0.00 If	39.25 /mh	0	75.00 /lf	0	0	0.00 /lf	0	0	0	0
	Caulking - CMU Joints	7920.100	240.00 If	39.25 /mh	942	4.00 /lf	1,027	0	0.00 /lf	0	0	1,969	2,393
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.25 Mnth	0.00 /Mnth	0	0.00 /Mnth	0	0	1,500.00 /Mnth	375	25	400	400
	Boom Lift (L)	1900.300	0.25 Mnth	0.00 /Mnth	0	0.00 /Mnth	0	0	5,500.00 /Mnth	1,375	313	1,688	1,688
	Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02		1.00 If		942		1,527			1,750	338	4,557	4,981
	0760- Caulking - Misc - 24A03												
	Caulking - Roofing	7920.100	254.00 If	39.25 /mh	997	2.00 /lf	544		/lf			1,541	1,989
	Caulking - Louvers	7920.200	54.00 If	39.25 /mh	212	3.00 /lf	173		/lf			385	481
	Caulking - HVAC Penetrations	7920.100	12.00 If	39.25 /mh	94	2.00 /lf	26		/lf			120	162

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0760- Caulking - Misc - 24A03												
	Caulking - Electrical Penetrations	7920.100	4.00 If	39.25 /mh	31	2.00 /lf	9		/lf			40	54
	Caulking - Process Penetrations	7920.100	27.00 If	39.25 /mh	212	2.00 /lf	58		/lf			270	365
	Caulking - Misc - 24A03		1.00 If		1,546		809					2,355	3,051
	ARCH Architectural				4,082		9,091			1,750	338	15,261	17,097
	24 - EQPS EQ Pump Station				4,082		9,091			1,750	338	15,261	17,097
	25 - EQ EQ Basins												
	ARCH Architectural												
	0760- Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02												
	Misc Materials	7920.300	1.00 ls	/ls		500.00 /ls	500		/ls			500	500
	Compressible Filler - Control Joint 4"	4090.180	382.00 lf	39.25 /mh		20.00 /lf	7,640		/lf			7,640	7,640
	Caulking - CMU Joints	7920.100	382.00 lf	39.25 /mh	1,499	4.00 /lf	1,635		/lf			3,134	3,809
	Boom Lift (L)	1900.300	0.15 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	825	188	1,013	1,013
	Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02		1.00 If		1,499		9,775			825	188	12,287	12,962
	0760- Caulking - Misc - 25A01												
	Caulking - Roofing	7920.100	555.00 lf	39.25 /mh	2,178	2.00 /lf	1,188		/lf			3,366	4,346
	Caulking - Misc - 25A01		1.00 If		2,178		1,188					3,366	4,346
	ARCH Architectural				3,678		10,963			825	188	15,653	17,308
	25 - EQ EQ Basins				3,678		10,963			825	188	15,653	17,308
	45 - RPUMP Reuse Pump Station												
	ARCH Architectural												
	0760- Caulking - Door Schedule - 01A01												
	Caulking Doors - 451A	7920.200	37.00 lf	39.25 /mh	145	3.00 /lf	119		/lf			264	329
	Caulking Doors - 451B	7920.200	48.00 lf	39.25 /mh	188	3.00 /lf	154		/lf			342	427
	Caulking - Door Schedule - 01A01		100.00 If		334		273					606	757
	0760- Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02												
	Misc Materials	7920.300	1.00 ls	/ls		500.00 /ls	500		/ls			500	500
	Compressible Filler - Control Joint 4"	4090.180	39.00 lf	39.25 /mh		25.00 /lf	975		/lf			975	975
	Compressible Filler - Expansion Joint 12"	4090.180	58.00 lf	39.25 /mh		75.00 /lf	4,350		/lf			4,350	4,350
	Caulking - CMU Joints	7920.100	155.00 lf	39.25 /mh	608	4.00 /lf	663		/lf			1,272	1,546
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	0.10 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	150	10	160	160
	Boom Lift (L)	1900.300	0.10 Mnth	/Mnth		/Mnth			5,500.00 /Mnth	550	125	675	675
	Caulking - CMU Control/Expansion Joints - Detail 10/ 01A02		1.00 If		608		6,488			700	135	7,932	8,206
	0760- Caulking - Misc - 45A02												
	Caulking - Roofing	7920.100	304.00 lf	39.25 /mh	1,193	2.00 /lf	651		/lf			1,844	2,381
	Caulking - HVAC Penetrations	7920.100	72.00 lf	39.25 /mh	565	2.00 /lf	154		/lf			719	974
	Caulking - Electrical Penetrations	7920.100	13.00 lf	39.25 /mh	102	2.00 /lf	28		/lf			130	176
	Caulking - Misc - 45A02		1.00 If		1,860		832					2,693	3,530
	ARCH Architectural				2,802		7,594			700	135	11,231	12,492
	45 - RPUMP Reuse Pump Station				2,802		7,594			700	135	11,231	12,492
	079200.00 Joint Sealants				18,361		54,404			4,675	930	78,370	86,633
081113.00	Hollow Metal Doors & Frames												
00 - GEN	General												
OPEN	Openings												
0800-	Hollow metal door supply												
	Purchase HM Doors & Frames and hardware	8110.110	1.00 ls	/ls		/ls		55,000	/ls			55,000	55,000
	Sub - Aluminum Window	8510.300	1.00 ea	/ea		/ea		4,500	/ea			4,500	4,500
	Hollow metal door supply							59,500				59,500	59,500
	OPEN Openings							59,500				59,500	59,500
	00 - GEN General							59,500				59,500	59,500
16 - EQE	EQUIP EQ Equipment Room												
OPEN	Openings												
0800-1 EQ	Equip Room Doors												
	Install HM Double Frames	8110.100	1.00 ea	39.25 /mh	314	225.00 /ea	225		/ea			539	680
	HM Door Leafs	8110.105	2.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Install Hardware by Leaf	8115.100	2.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	EQ Equip Room Doors		2.00 ea		2,198		225					2,423	3,412
	OPEN Openings				2,198		225					2,423	3,412
	16 - EQEQUIP EQ Equipment Room				2,198		225					2,423	3,412
23 - WPS	PS West Primary Sludge Pump Station												
OPEN	Openings												
0800-1 West	Primary Sludge HM Doors												
	Install HM Single Frames	8110.100	3.00 ea	39.25 /mh	942	185.00 /ea	555		/ea			1,497	1,921
	Install HM Double Frames	8110.100	1.00 ea	39.25 /mh	314	225.00 /ea	225		/ea			539	680
	HM Door Leafs	8110.105	5.00 ea	39.25 /mh	1,570	0.00 /ea	0		/ea			1,570	2,277
	Install Hardware by Leaf	8115.100	5.00 ea	39.25 /mh	3,140	/ea			/ea			3,140	4,553
	West Primary Sludge HM Doors		5.00 ea		5,966		780					6,746	9,431

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	OPEN Openings				5,966		780					6,746	9,431
	23 - WPS PS West Primary Sludge Pump Station				5,966		780					6,746	9,431
	24 - EQPS EQ Pump Station												
	OPEN Openings												
	0800-1 EQ Pump Station HM Doors												
	Install HM Double Frames	8110.100	1.00 ea	39.25 /mh	314	225.00 /ea	225		/ea			539	680
	HM Door Leafs	8110.105	2.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Install Hardware by Leaf	8115.100	2.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	EQ Pump Station HM Doors		2.00 ea		2,198		225					2,423	3,412
	OPEN Openings				2,198		225					2,423	3,412
	24 - EQPS EQ Pump Station				2,198		225					2,423	3,412
	45 - RELEC Reuse Electrical Room												
	OPEN Openings												
	0800-1 Reuse Elect Room HM Doors												
	Install HM Single Frames	8110.100	1.00 ea	39.25 /mh	314	185.00 /ea	185		/ea			499	640
	Install HM Double Frames	8110.100	1.00 ea	39.25 /mh	314	225.00 /ea	225		/ea			539	680
	HM Door Leafs	8110.105	3.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Install Hardware by Leaf	8115.100	3.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Reuse Elect Room HM Doors		3.00 ea		3,454		410					3,864	5,418
	OPEN Openings				3,454		410					3,864	5,418
	45 - RELEC Reuse Electrical Room				3,454		410					3,864	5,418
	081113.00 Hollow Metal Doors & Frames				13,816		1,640	59,500				74,956	81,173
083323.00	Overhead Coiling Doors												
	23 - WPS PS West Primary Sludge Pump Station												
	OPEN Openings												
	0830- Overhead Coiling Door												
	Coiling OH Doors Elec Operated	8360.100	1.00 ea	/ea		/ea		19,000	/ea			19,000	19,000
	Overhead Coiling Door		2.00 LS					19,000				19,000	19,000
	OPEN Openings							19,000				19,000	19,000
	23 - WPS PS West Primary Sludge Pump Station							19,000				19,000	19,000
	083323.00 Overhead Coiling Doors							19,000				19,000	19,000
099601.00	High-Performance Coatings												
	00 - GEN General												
	COAT Coatings												
	095 1- Coatings Entire Project												
	Painting Subcontractor Coatings Entire Job	9910.100	1.00 ls	/ls		/ls		750,000	/ls			750,000	750,000
	Painting Subcontractor Spectrashield	9910.100	1.00 ls	/ls		/ls		35,000	/ls			35,000	35,000
	Painting Subcontractor Bond	2740.840	1.00 ls	/ls		0.00 /ls	0	22,500	/ls			22,500	22,500
	Coatings Entire Project		1.00 lf					807,500				807,500	807,500
	COAT Coatings							807,500				807,500	807,500
	00 - GEN General							807,500				807,500	807,500
	099601.00 High-Performance Coatings							807,500				807,500	807,500
101400.00	Signage												
	00 - GEN General												
	MAS Masonry												
	10-102 Div 10 Sepcialties												
	Purchase Signage	10810.100	1.00 ea	/ea		10,000.00 /ea	10,000		/ea			10,000	10,000
	Install Signage (102 signs plus stickers and flow)	10810.100	1.00 ls	39.25 /mh	5,574	/ls			/ls			5,574	8,082
	Knox Box	8115.200	2.00 ea	39.25 /mh	314	1,100.00 /ea	2,200		/ea			2,514	2,655
	10 lb extenguisher with wall mounting bracket include 2ea electrical special fire	10520.200	6.00 ea	39.25 /mh	471	400.00 /ea	2,400		/ea			2,871	3,083
	Div 10 Sepcialties				6,359		14,600					20,959	23,820
	MAS Masonry				6,359		14,600					20,959	23,820
	00 - GEN General				6,359		14,600					20,959	23,820
	101400.00 Signage				6,359		14,600					20,959	23,820
224201.00	Plumbing Systems												
	00 - GEN General												
	PLUM Plumbing												
	15 - 2 Plumbing - Sub												
	Plumbing Subcontract	15403.100	1.00 ls	/ls		/ls		180,290	/ls			180,290	180,290
	Plumbing - Sub							180,290				180,290	180,290
	PLUM Plumbing							180,290				180,290	180,290
	00 - GEN General							180,290				180,290	180,290
	00 - SITE Site												
	PLUM Plumbing												
	02614- 2" NG Line Exisitng to West Primary Pump												
	Trench Excavtion 0- 4'	2333.010	110.00 lf	39.25 /mh	691	/lf			/lf			691	1,002
	Trench Backfill 0- 4'	2333.020	110.00 lf	39.25 /mh	1,079	/lf			/lf			1,079	1,565

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02614- 2" NG Line Exisitng to West Primary Pump												
	Utility Bedding Peastone	2305.200	25.00 cy	/cy		30.00 /ton	1,200		/cy			1,200	1,200
	Spoils to Waste	2333.060	25.00 cy	39.25 /mh	98	/cy			/cy			98	142
	HDPE Coiled Pipe 2	2631.201	110.00 lf	39.25 /mh		0.00 /lf	0		/lf				
	HDPE Coiled Pipe Caps 2	2631.250	2.00 ea	39.25 /mh		/lf			/ea				
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	552	210	762	762
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	432	180	612	612
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	300	72	372	372
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			400.00 /Mnth	24	6	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	195	30	225	225
	Reg Low Press Flg 2"	15403.170	1.00 ea	39.25 /mh		/ea			/ea				
	2" NG Line Exisitng to West Primary Pump		110.00 lf		1,868		1,200			1,503	498	5,069	5,910
	PLUM Plumbing				1,868		1,200			1,503	498	5,069	5,910
	00 - SITE Site				1,868		1,200			1,503	498	5,069	5,910
	23 - WPS PS West Primary Sludge Pump Station												
	PLUM Plumbing												
	02641- West Primary PS Underslab Drain (attached to slab)												
	Testing Vacuum/Low Head & Leak - Pipe	1166.100	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Trench Excavtion 0- 4'	2333.010	46.00 lf	39.25 /mh	217	/lf			/lf			217	314
	Trench Backfill 0- 4'	2333.020	46.00 lf	39.25 /mh	361	/lf			/lf			361	524
	Reuse Trench Spoils @ Bedding	2333.040	6.82 cy	/cy		/ton			/cy				
	Spoils to Waste	2333.060	6.82 cy	39.25 /mh	27	/cy			/cy			27	39
	DI Pipe Push - Class 53 4	2511.101	46.00 lf	39.25 /mh		0.00 /lf	0		/lf				
	DI MJ Std Wgt 45 4	2511.214	7.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	DI MJ Std Wgt Wye 4	2511.228	5.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Polybag 12" and Smaller	2333.090	46.00 lf	39.25 /mh		1.00 /lf	51		/lf			51	51
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	193	74	267	267
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	151	63	214	214
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	50	12	62	62
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			400.00 /Mnth	4	1	5	5
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	33	5	38	38
	Formwork Pipe Encasement	3100.108	250.00 sf	39.25 /mh	3,434	2.00 /sf	525		/sf			3,959	5,505
	Pipe Encasement Rebar	3200.980	1.00 tn	39.25 /mh	1,256	1,600.00 /tn	1,600		/tn			2,856	3,421
	Place Encasement Concrete	3310.195	15.00 cy	39.25 /mh	945	210.00 /cy	3,371		/cy			4,315	4,741
	Floor Drain 4"	15403.160	5.00 ea	39.25 /mh	785	/ea			/ea			785	1,138
	Slab Void - 12"	3100.320	184.00 sf	39.25 /mh	361	8.00 /sf	1,619		/sf			1,980	2,143
	Wall Void soil retention board	3100.320	96.00 lf	39.25 /mh	377	5.00 /lf	528		/lf			905	1,074
	Pipe Tie Downs (Medium)	3150.200	11.00 ea	39.25 /mh	1,295	50.00 /ea	550		/ea			1,845	2,428
	West Primary PS Underslab Drain (attached to slab)		46.00 lf		9,372		8,243			431	155	18,201	22,418
	PLUM Plumbing				9,372		8,243			431	155	18,201	22,418
	23 - WPS PS West Primary Sludge Pump Station				9,372		8,243			431	155	18,201	22,418
	24 - EQPS EQ Pump Station												
	PLUM Plumbing												
	02641- EQ PS Underslab Drain Encased												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Reuse Trench Spoils @ Bedding	2333.040	3.85 cy	/cy		/ton			/cy				
	DI Pipe Push - Class 52 4	2511.101	26.00 lf	39.25 /mh		0.00 /lf	0		/lf				
	DI MJ Std Wgt 45 4	2511.214	6.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	DI MJ Std Wgt Wye 4	2511.228	3.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Polybag 12" and Smaller	2333.090	26.00 lf	39.25 /mh		0.00 /lf	0		/lf				
	Place Pipe Encasement	3310.195	8.00 cy	39.25 /mh	1,008	0.00 /cy	0		/cy			1,008	1,462
	Formwork Pipe Encasement	3100.108	100.00 sf	39.25 /mh	1,570	2.00 /sf	210		/sf			1,780	2,487
	Pipe Encasement Rebar	3200.980	0.63 tn	39.25 /mh	981	1,600.00 /tn	1,000		/tn			1,981	2,423
	Floor Drain 4"	15403.160	3.00 ea	39.25 /mh	471	/ea			/ea			471	683
	4500 psi Concrete	3310.100	5.00 cy	/cy		210.00 /cy	1,124		/cy			1,124	1,124
	CISP Cleanout 4-NH-W/PLUG-31/2A	15150.120	1.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	EQ PS Underslab Drain Encased		26.00 lf		4,344		2,384			50		6,778	8,733
	PLUM Plumbing				4,344		2,384			50		6,778	8,733

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	24 - EQPS EQ Pump Station				4,344		2,384			50		6,778	8,733
	224201.00 Plumbing Systems				15,584		11,827	180,290		1,984	653	210,338	217,351
230500.00	HVAC												
00 - GEN	General												
	HVAC HVAC												
15	- 1 HVAC - Sub												
	HVAC Subcontractor	15402.010	1.00 ls	/ls		/ls		927,976	/ls			927,976	927,976
	HVAC Subcontractor Bond	15402.010	1.00 ls	/ls		/ls			/ls				
	HVAC Admin Bldg Rework	15402.010	1.00 ls	/ls		/ls		0	/ls				
	HVAC Balance Odor Control	15402.010	1.00 ls	/ls		/ls		0	/ls				
	HVAC - Sub							927,976				927,976	927,976
	HVAC HVAC							927,976				927,976	927,976
	00 - GEN General							927,976				927,976	927,976
	230500.00 HVAC							927,976				927,976	927,976
233117.00	FRP Ductwork												
00 - SITE	Site												
	HVAC HVAC												
	150-02 10" FA FRP at NW Influent MH												
	FRP Pipe 10	2514.100	3.00 lf	39.25 /mh	236	0.00 /lf	0		/lf			236	341
	FRP Flange 10"	2514.800	2.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Expansion Joint Flanged Rubber 10"	15112.050	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Odor Control Dampers 10"	11000.260	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	NBG Kit 125# SS 10in	15125.012	3.00 ea	39.25 /mh	236	170.00 /ea	510		/ea			746	851
	Link Seal Size LS-400-S 14" core double	15123.100	18.00 ea	39.25 /mh	106	20.00 /ea	360		/ea			466	514
	Core Drilled Hole - 14 -*	15122.100	1.00 ea	39.25 /mh	79	1.00 /ea	1	350	/ea			430	465
	10" FA FRP at NW Influent MH				1,205		871	350				2,426	2,968
	HVAC HVAC				1,205		871	350				2,426	2,968
	00 - SITE Site				1,205		871	350				2,426	2,968
	16 - EQEQUIP EQ Equipment Room												
	FRP FRP												
	150-02 8" FA FRP Duct EQ Equip Rm to Weir Structure (16M01)												
	FRP Pipe 8	2514.100	70.00 lf	39.25 /mh	1,374	0.00 /lf	0		/lf			1,374	1,992
	FRP Flange 8"	2514.800	10.00 ea	39.25 /mh	393	0.00 /ea	0		/ea			393	569
	FRP 90 ell 8	2514.200	9.00 ea	39.25 /mh	353	0.00 /ea	0		/ea			353	512
	Expansion Joint Flanged Rubber 8" sst	15112.050	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	Support Pad Form > 7'-0 x 4'-0 x 2'-0 thick	3100.164	2.00 ea	39.25 /mh	2,512	450.00 /ea	945		/ea			3,457	4,587
	PS Pipe Stand for 8in FRP10ft 0in floor to CL	15060.406	2.00 ea	39.25 /mh	314	1,720.00 /ea	3,440		/ea			3,754	3,895
	Link Seal Size LS-400-S (12" hole CIP no sleeve) Double seal	15123.100	36.00 ea	39.25 /mh	212	20.00 /ea	720		/ea			932	1,027
	Odor Control Dampers 8"	11000.260	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	FRP Pipe 10	2514.100	10.00 lf	39.25 /mh	196	0.00 /lf	0		/lf			196	285
	FRP Tee 10	2514.300	1.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	FRP Reducer 10 x 8	2514.600	2.00 ea	39.25 /mh	157	0.00 /ea	0		/ea			157	228
	Odor Control Dampers 10"	11000.260	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Fernco Cplng w/ 2 ea SS Pipe Clamps 10"	15112.550	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	PS Knee Brace for 8in DIP 18in horizontal length HDG	15060.278	4.00 ea	39.25 /mh	628	1,600.00 /ea	6,400		/ea			7,028	7,311
	PS Pipe Stand w/ U-bolt for 8in DIP 5ft 0in floor to CL HDG	15060.412	1.00 ea	39.25 /mh	157	1,720.00 /ea	1,720		/ea			1,877	1,948
	Neoprene Sheets	7100.100	32.00 sf	39.25 /mh	628	2.00 /sf	68		/sf			696	979
	PS Clevis Hanger SS 8in	15060.096	3.00 ea	39.25 /mh	353	450.00 /ea	1,350		/ea			1,703	1,862
	8" FA FRP Duct EQ Equip Rm to Weir Structure (16M01)				8,140		14,643					22,784	26,447
	FRP FRP				8,140		14,643					22,784	26,447
	16 - EQEQUIP EQ Equipment Room				8,140		14,643					22,784	26,447
20 - PC 4	Primary Clarifier 4												
	FRP FRP												
	150-02 14" FA FRP at Primary 4 (20M02)												
	FRP Pipe 16	2514.100	6.00 lf	39.25 /mh	236	0.00 /lf	0		/lf			236	341
	FRP Pipe 14	2514.100	20.00 lf	39.25 /mh	785	0.00 /lf	0		/lf			785	1,138
	FRP Reducer 16 x 14	2514.600	1.00 ea	39.25 /mh	118	0.00 /ea	0		/ea			118	171
	FRP Flange 14	2514.800	10.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Fernco Cplng w/ 2 ea SS Pipe Clamps 16"	15112.550	1.00 ea	39.25 /mh	6	/ea			/ea			6	9
	Odor Control Dampers 14	11000.260	1.00 ea	39.25 /mh	471	/ea			/ea			471	683
	Fernco Cplng w/ sst Flanges 14"	15112.550	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	PS Knee Brace for 14in DIP 18in horizontal length HDG	15060.278	4.00 ea	39.25 /mh	628	1,660.00 /ea	6,640		/ea			7,268	7,551
	NBG Kit 125# SS 14in (special)	15125.012	6.00 ea	39.25 /mh	471	560.00 /ea	3,360		/ea			3,831	4,043
	Fernco Cplng w/ 2 ea SS Pipe Clamps 16"	15112.550	1.00 ea	39.25 /mh	79	/ea			/ea			79	114
	PS Pipe Stand for 14in DIP 4ft 0in floor to CL SS	15060.408	1.00 ea	39.25 /mh	157	2,400.00 /ea	2,400		/ea			2,557	2,628
	PS Knee Brace for 14in DIP 18in horizontal length SS	15060.280	4.00 ea	39.25 /mh	628	2,150.00 /ea	8,600		/ea			9,228	9,511
	14" FA FRP at Primary 4 (20M02)				3,656		21,000					24,656	26,301
	FRP FRP				3,656		21,000					24,656	26,301
	20 - PC 4 Primary Clarifier 4				3,656		21,000					24,656	26,301
	24 - EQPS EQ Pump Station												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	HVAC HVAC												
	150-02 FA Line 6" EQPS												
	FRP Pipe 6	2514.100	20.00 lf	39.25 /mh	393	0.00 /lf	0		/lf			393	569
	FRP Flange 6"	2514.800	8.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	FRP 90 ell 6	2514.200	2.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	PS Knee Brace for 6in DIP 12in horizontal length 316SS	15060.280	2.00 ea	39.25 /mh	314	1,250.00 /ea	2,500		/ea			2,814	2,955
	Odor Control Dampers 6	11000.260	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Fernco Cplng w/ 2 ea SS Pipe Clamps 6"	15112.550	1.00 ea	39.25 /mh	39	/ea			/ea			39	57
	Expansion Joint Restrained Flanged SS 6"	15112.080	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Neoprene Sheets	7100.100	32.00 sf	39.25 /mh	314	2.00 /sf	68		/sf			382	524
	FA Line 6" EQPS				1,609		2,568					4,178	4,902
	HVAC HVAC				1,609		2,568					4,178	4,902
	24 - EQPS EQ Pump Station				1,609		2,568					4,178	4,902
	25 - EQ EQ Basins												
	FRP FRP												
	15 - 1 FA Pipe EQ Basin (25M02)												
	FRP Pipe 16 (60' LF w/ 4ea 90)	2514.100	1.00 ls	39.25 /mh	1,256	0.00 /ls	0		/ls			1,256	1,821
	Fernco Cplng w/ 2 ea SS Pipe Clamps 16" (Det HO310)	15112.550	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Odor Control Dampers 16"	11000.260	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	PS Knee Brace for 16in DIP 18in horizontal length 316 SS (det HS326)	15060.280	10.00 ea	39.25 /mh	1,570	2,150.00 /ea	21,500		/ea			23,070	23,777
	Neoprene Sheets	7100.100	16.00 sf	39.25 /mh	314	2.00 /sf	34		/sf			348	490
	NBG Kit 125# 316 SS 16in	15125.012	12.00 ea	39.25 /mh	942	380.00 /ea	4,560		/ea			5,502	5,926
	Link Seal Size LS-360-S (2ea 20" holes CIP no sleeve)	15123.100	40.00 ea	39.25 /mh	236	19.00 /ea	760		/ea			996	1,101
	FA Pipe EQ Basin (25M02)				5,103		26,854					31,957	34,253
	150-02 FRP Vent Piping EQ Basin (25M02)												
	FRP 90 ell 14	2514.200	4.00 ea	39.25 /mh	314	0.00 /ea	0		/ea			314	455
	FRP Pipe 14	2514.100	10.00 lf	39.25 /mh	196	0.00 /lf	0		/lf			196	285
	FRP Flange 14	2514.800	20.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Odor Control Dampers 14	11000.260	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Mech Special - 14 * .5x.5 304SST mesh Screen	15112.010	2.00 ea	39.25 /mh	314	250.00 /ea	500		/ea			814	955
	NBG Kit 125# SS 14in	15125.012	10.00 ea	39.25 /mh	785	250.00 /ea	2,500		/ea			3,285	3,638
	Sleeve SS 14" x1'-6	15121.200	2.00 ea	39.25 /mh	157	375.00 /ea	750		/ea			907	978
	FRP Vent Piping EQ Basin (25M02)				2,394		3,750					6,144	7,222
	FRP FRP				7,497		30,604					38,101	41,475
	25 - EQ EQ Basins				7,497		30,604					38,101	41,475
	233117.00 FRP Ductwork				22,108		69,687	350				92,145	102,093
260500.00	Electrical												
00 - GEN	General												
ELEC	Electrical												
16	-1 Electrical - Sub												
	Electrical Sub	16000.001	1.00 ls	/ls		/ls		7,050,000	/ls			7,050,000	7,050,000
	Electrical Bond	16000.001	1.00 ls	/ls		/ls			/ls				
	Temporary Construction Lighting	16000.001	1.00 ls	/ls		/ls			/ls				
	Temporary Construction Power	16000.001	1.00 ls	/ls		/ls		75,000	/ls			75,000	75,000
	Electrical Permit	16000.001	1.00 ls	/ls		/ls			/ls				
	Electrical - Sub							7,125,000				7,125,000	7,125,000
	ELEC Electrical							7,125,000				7,125,000	7,125,000
	00 - GEN General							7,125,000				7,125,000	7,125,000
20 - PC 4	Primary Clarifier 4												
ELEC	Electrical												
16-01	Level Instruments Radar												
	Instrument - Level - Foam - Radar Type - (LE20.1043, 20.1045)	17300.000	2.00 ea	39.25 /mh	157	0.00 /ea	0		/ea			157	228
	Mounting Brackets (Detail NL184)	11700.110	2.00 ea	39.25 /mh	157	550.00 /ea	1,100		/ea			1,257	1,328
	PS Anchor Bolt 3/4x8 SS	15060.020	4.00 ea	39.25 /mh	41	15.25 /ea	61		/ea			102	121
	Level Instruments Radar				355		1,161					1,516	1,676
16-01	Float Level Switches												
	Instrument - Level - Float Switch (LSHH20.1047)	17300.000	1.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Mounting Brackets Detail NL101	11700.110	1.00 ea	39.25 /mh	79	125.00 /ea	125		/ea			204	239
	Float Level Switches				157		125					282	353
	ELEC Electrical				512		1,286					1,798	2,029
	20 - PC 4 Primary Clarifier 4				512		1,286					1,798	2,029
22 - EPS	PS East Primary Sludge Pump Station												
ELEC	Electrical												
16-01	Electrical Magmeters												
	Instrument - Flow - Magnetic Flow Meter - 6in (FE-D23)	17200.000	1.00 ea	39.25 /mh	157	0.00 /ea	0		/ea			157	228
	Electrical Magmeters				157							157	228
	ELEC Electrical				157							157	228
	22 - EPS PS East Primary Sludge Pump Station				157							157	228
24 - EQPS	EQ Pump Station												
ELEC	Electrical												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	16-01 Electrical Magmeters												
	Instrument - Flow - Magnetic Flow Meter - 18in (FE 24.1019)	17200.000	1.00 ea	39.25 /mh	314	0.00 /ea	0		/ea			314	455
	Electrical Magmeters				314							314	455
	16-01 Level Instruments Radar												
	Instrument - Level - Foam - Radar Type - (LE24.1001)	17300.000	1.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Mounting Brackets (Detail NL184)	11700.110	1.00 ea	39.25 /mh	79	550.00 /ea	550		/ea			629	664
	PS Anchor Bolt 3/4x8 SS	15060.020	2.00 ea	39.25 /mh	21	15.25 /ea	31		/ea			51	60
	Level Instruments Radar				178		581					758	838
	ELEC Electrical				492		581					1,072	1,293
	24 - EQPS EQ Pump Station				492		581					1,072	1,293
	25 - EQ EQ Basins												
	ELEC Electrical												
	16-01 Electrical Magmeters												
	Instrument - Flow - Magnetic Flow Meter - 16in(FE25.1113 & 25.1123)	17200.000	2.00 ea	39.25 /mh	314	0.00 /ea	0		/ea			314	455
	Electrical Magmeters				314							314	455
	16-01 Level Instruments Radar												
	Mounting Brackets (Detail NL184)	11700.110	2.00 ea	39.25 /mh	157	550.00 /ea	1,100		/ea			1,257	1,328
	PS Anchor Bolt 3/4x8 SS	15060.020	4.00 ea	39.25 /mh	314	15.25 /ea	61		/ea			375	516
	Instrument - Level - Foam - Radar Type -(LE25.1106, 25.1125)	17300.000	2.00 ea	39.25 /mh	103	0.00 /ea	0		/ea			103	150
	Level Instruments Radar				574		1,161					1,735	1,994
	16-01 Float Level Switches												
	Instrument - Level - Float Switch (LSH25.1104, 25.1119, 25.1124)	17300.000	3.00 ea	39.25 /mh	310	0.00 /ea	0		/ea			310	449
	Mounting Brackets Detail NL101	11700.110	3.00 ea	39.25 /mh	155	125.00 /ea	375		/ea			530	600
	Float Level Switches				465		375					840	1,049
	ELEC Electrical				1,353		1,536					2,889	3,498
	25 - EQ EQ Basins				1,353		1,536					2,889	3,498
	260500.00 Electrical				2,514		3,403	7,125,000				7,130,917	7,132,048
260544.00													
	00 - SITE Site												
	ELEC Electrical												
	16-01 Ductbank DB-A												
	Duct Bank Excavation/Backfill	16000.002	12.00 lf	39.25 /mh	165	/lf			1.00 /lf	12		177	251
	Duct Bank Formwork	16000.002	50.00 sf	39.25 /mh	491	2.00 /sf	100		/sf			591	811
	Duct Bank Concrete	3310.100	3.24 cy	39.25 /mh	254	197.00 /cy	638		/cy			893	1,007
	Color Dye	3310.110	3.24 cy	/cy		10.00 /cy	35		/cy			35	35
	Duct Bank Rebar	3210.230	0.30 tn	39.25 /mh	377	1,600.00 /ton	480		/tn			857	1,026
	Duct Bank Bedding	2305.500	7.00 tn	6.00 /tn	42	30.00 /ton	210		/tn			252	271
	Electrical Handholes	16000.002	1.00 ea	39.25 /mh	942	2,500.00 /ea	2,500		/ea			3,442	3,866
	Tracer Tape for Duct Bank	16000.002	14.00 lf	39.25 /mh	14	0.10 /lf	1		/lf			16	22
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	6.00 Mnth	/Mnth		/Mn th			5,510.00 /Mnth	33,060	12,000	45,060	45,060
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	6,500	1,000	7,500	7,500
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	7,600	4,000	11,600	11,600
	Mikasa Jumping Jack Compactor (L)	1900.138	6.00 Mnth	/Mnth		/Mn th			400.00 /Mnth	2,400	600	3,000	3,000
	Ductbank DB-A		12.00 lf		2,285		3,965			49,572	17,600	73,422	74,450
	16-01 Ductbank DB-B1												
	Duct Bank Excavation/Backfill	16000.002	14.00 lf	39.25 /mh	188	/lf			1.00 /lf	14		202	287
	Duct Bank Formwork	16000.002	48.00 sf	39.25 /mh	471	2.00 /sf	96		/sf			567	779
	Duct Bank Concrete	3310.100	2.22 cy	39.25 /mh	174	197.00 /cy	438		/cy			612	691
	Color Dye	3310.110	2.22 cy	/cy		10.00 /cy	24		/cy			24	24
	Duct Bank Rebar	3210.230	0.30 tn	39.25 /mh	377	1,600.00 /ton	480		/tn			857	1,026
	Duct Bank Bedding	2305.500	3.00 tn	6.00 /tn	18	30.00 /ton	90		/tn			108	116
	Tracer Tape for Duct Bank	16000.002	16.00 lf	39.25 /mh	17	0.10 /lf	2		/lf			18	26
	Ductbank DB-B1		14.00 lf		1,245		1,129			14		2,388	2,948
	16-01 Ductbank B												
	Duct Bank Excavation/Backfill	16000.002	33.00 lf	39.25 /mh	443	/lf			1.00 /lf	33		476	676
	Duct Bank Formwork	16000.002	155.00 sf	39.25 /mh	1,521	2.00 /sf	310		/sf			1,831	2,515
	Duct Bank Concrete	3310.100	10.33 cy	39.25 /mh	811	197.00 /cy	2,036		/cy			2,847	3,212
	Color Dye	3310.110	10.33 cy	/cy		10.00 /cy	111		/cy			111	111
	Duct Bank Rebar	3210.230	0.75 tn	39.25 /mh	942	1,600.00 /ton	1,200		/tn			2,142	2,566
	Duct Bank Bedding	2305.500	3.00 tn	6.00 /tn	18	30.00 /ton	90		/tn			108	116
	Tracer Tape for Duct Bank	16000.002	33.00 lf	39.25 /mh	34	0.10 /lf	3		/lf			37	53
	Ductbank B		33.00 lf		3,769		3,749			33		7,552	9,248
	16-01 Ductbank C												
	Duct Bank Excavation/Backfill	16000.002	32.00 lf	39.25 /mh	430	/lf			1.00 /lf	32		462	655
	Duct Bank Formwork	16000.002	240.00 sf	39.25 /mh	2,355	2.00 /sf	480		/sf			2,835	3,895
	Duct Bank Concrete	3310.100	13.33 cy	39.25 /mh	1,047	197.00 /cy	2,627		/cy			3,673	4,144
	Color Dye	3310.110	13.33 cy	/cy		10.00 /cy	143		/cy			143	143
	Duct Bank Rebar	3210.230	1.00 tn	39.25 /mh	1,256	1,600.00 /ton	1,600		/tn			2,856	3,421
	Duct Bank Bedding	2305.500	3.00 tn	6.00 /tn	18	30.00 /ton	90		/tn			108	116
	Tracer Tape for Duct Bank	16000.002	32.00 lf	39.25 /mh	33	0.10 /lf	3		/lf			36	51

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Ductbank C		32.00 lf		5,138		4,942			32		10,113	12,425
16-01	Ductbank D												
	Duct Bank Excavation/Backfill	16000.002	12.00 lf	39.25 /mh	161	/lf			1.00 /lf	12		173	246
	Duct Bank Formwork	16000.002	80.00 sf	39.25 /mh	785	2.00 /sf	160		/sf			945	1,298
	Duct Bank Concrete	3310.100	2.96 cy	39.25 /mh	233	197.00 /cy	584		/cy			816	921
	Color Dye	3310.110	2.96 cy	/cy		10.00 /cy	32		/cy			32	32
	Duct Bank Rebar	3210.230	0.04 tn	39.25 /mh	50	1,600.00 /ton	64		/tn			114	137
	Duct Bank Bedding	2305.500	1.00 tn	6.00 /tn	6	30.00 /ton	30		/tn			36	39
	Tracer Tape for Duct Bank	16000.002	12.00 lf	39.25 /mh	12	0.10 /lf	1		/lf			14	19
	Tie in Exist Manhole 0 "- 6" (CHH-1)	2327.100	4.00 ea	39.25 /mh	628	30.00 /ea	120		/ea			748	1,031
	Ductbank D		12.00 lf		1,875		991			12		2,878	3,722
16-01	Ductbank E												
	Duct Bank Excavation/Backfill	16000.002	76.00 lf	39.25 /mh	1,020	/lf			1.00 /lf	76		1,096	1,556
	Duct Bank Formwork	16000.002	592.00 sf	39.25 /mh	5,809	2.00 /sf	1,184		/sf			6,993	9,607
	Duct Bank Concrete	3310.100	21.93 cy	39.25 /mh	1,721	197.00 /cy	4,319		/cy			6,041	6,815
	Color Dye	3310.110	21.93 cy	/cy		10.00 /cy	235		/cy			235	235
	Duct Bank Rebar	3210.230	2.10 tn	39.25 /mh	2,638	1,600.00 /ton	3,360		/tn			5,998	7,185
	Duct Bank Bedding	2305.500	7.00 tn	6.00 /tn	42	30.00 /ton	210		/tn			252	271
	Tracer Tape for Duct Bank	16000.002	76.00 lf	39.25 /mh	79	0.10 /lf	8		/lf			86	121
	Ductbank E		76.00 lf		11,309		9,316			76		20,700	25,789
16-01	Ductbank DBC00480												
	Duct Bank Excavation/Backfill	16000.002	33.00 lf	39.25 /mh	443	/lf			1.00 /lf	33		476	676
	Duct Bank Bedding	2305.500	15.00 tn	/tn		30.00 /ton	450		/tn			450	450
	Tracer Tape for Duct Bank	16000.002	33.00 lf	39.25 /mh	34	0.10 /lf	3		/lf			37	53
	Ductbank DBC00480		33.00 lf		477		453			33		963	1,178
16-01	Ductbank F												
	Duct Bank Excavation/Backfill	16000.002	45.00 lf	39.25 /mh	604	/lf			1.00 /lf	45		649	921
	Duct Bank Formwork	16000.002	387.00 sf	39.25 /mh	3,797	2.00 /sf	774		/sf			4,571	6,280
	Duct Bank Concrete	3310.100	17.92 cy	39.25 /mh	1,406	197.00 /cy	3,530		/cy			4,936	5,569
	Color Dye	3310.110	17.92 cy	/cy		10.00 /cy	192		/cy			192	192
	Duct Bank Rebar	3210.230	1.80 tn	39.25 /mh	2,261	1,600.00 /ton	2,880		/tn			5,141	6,158
	Tracer Tape for Duct Bank	16000.002	45.00 lf	39.25 /mh	46	0.10 /lf	5		/lf			51	72
	Ductbank F		45.00 lf		8,115		7,380			45		15,540	19,192
16-01	Ductbank G												
	Duct Bank Excavation/Backfill	16000.002	12.00 lf	39.25 /mh	161	/lf			1.00 /lf	12		173	246
	Duct Bank Formwork	16000.002	90.00 sf	39.25 /mh	883	2.00 /sf	180		/sf			1,063	1,461
	Duct Bank Concrete	3310.100	4.17 cy	39.25 /mh	327	197.00 /cy	821		/cy			1,148	1,295
	Color Dye	3310.110	4.17 cy	/cy		10.00 /cy	45		/cy			45	45
	Duct Bank Rebar	3210.230	0.40 tn	39.25 /mh	251	1,600.00 /ton	640		/tn			891	1,004
	Tracer Tape for Duct Bank	16000.002	12.00 lf	39.25 /mh	12	0.10 /lf	1		/lf			14	19
	Tie in Exist Manhole 0 "- 6" (CHH-2)	2327.100	3.00 ea	39.25 /mh	471	30.00 /ea	90		/ea			561	773
	Ductbank G		12.00 lf		2,106		1,777			12		3,895	4,842
16-01	Ductbank H												
	Duct Bank Excavation/Backfill	16000.002	80.00 lf	39.25 /mh	1,074	/lf			1.00 /lf	80		1,154	1,638
	Duct Bank Formwork	16000.002	675.00 sf	39.25 /mh	6,623	2.00 /sf	1,350		/sf			7,973	10,954
	Duct Bank Concrete	3310.100	37.50 cy	39.25 /mh	2,944	197.00 /cy	7,388		/cy			10,331	11,656
	Color Dye	3310.110	37.50 cy	/cy		10.00 /cy	401		/cy			401	401
	Duct Bank Rebar	3210.230	3.70 tn	39.25 /mh	2,324	1,600.00 /ton	5,920		/tn			8,244	9,289
	Duct Bank Bedding	2305.500	5.00 tn	6.00 /tn	30	30.00 /ton	150		/tn			180	194
	Tracer Tape for Duct Bank	16000.002	80.00 lf	39.25 /mh	83	0.10 /lf	8		/lf			91	128
	Tie in Exist Manhole 0 "- 6" (CHH-2)	2327.100	6.00 ea	39.25 /mh	942	30.00 /ea	180		/ea			1,122	1,546
	Tie in Exist Manhole 0 "- 6" (EMH-12)	2327.100	6.00 ea	39.25 /mh	942	30.00 /ea	180		/ea			1,122	1,546
	Ductbank H		80.00 lf		14,962		15,577			80		30,618	37,351
16-01	Ductbank K												
	Duct Bank Excavation/Backfill	16000.002	150.00 lf	39.25 /mh	2,014	/lf			1.00 /lf	150		2,164	3,071
	Duct Bank Formwork	16000.002	800.00 sf	39.25 /mh	7,850	2.00 /sf	1,600		/sf			9,450	12,983
	Duct Bank Concrete	3310.100	29.63 cy	39.25 /mh	1,377	197.00 /cy	5,837		/cy			7,214	7,834
	Color Dye	3310.110	29.63 cy	/cy		10.00 /cy	317		/cy			317	317
	Duct Bank Rebar	3210.230	2.90 tn	39.25 /mh	3,642	1,600.00 /ton	4,640		/tn			8,282	9,921
	Duct Bank Bedding	2305.500	9.00 tn	6.00 /tn	54	30.00 /ton	270		/tn			324	348
	Electrical Handholes (HH-2)	16000.002	1.00 ea	39.25 /mh	942	2,500.00 /ea	2,500		/ea			3,442	3,866
	Tracer Tape for Duct Bank	16000.002	105.00 lf	39.25 /mh	108	0.10 /lf	11		/lf			119	168
	Tie in Exist Manhole 0 "- 6" (CHH-2)	2327.100	9.00 ea	39.25 /mh	1,413	30.00 /ea	270		/ea			1,683	2,319
	Tie in Exist MCC-E-2 incl	2327.100	1.00 ea	39.25 /mh	157	30.00 /ea	30		/ea			187	258
	Ductbank K		105.00 lf		17,558		15,475			150		33,183	41,084
16-01	Ductbank L												
	Duct Bank Excavation/Backfill	16000.002	95.00 lf	39.25 /mh	1,276	/lf			1.00 /lf	95		1,371	1,945
	Duct Bank Formwork	16000.002	736.00 sf	39.25 /mh	7,222	2.00 /sf	1,472		/sf			8,694	11,944
	Duct Bank Concrete	3310.100	27.26 cy	39.25 /mh	2,140	197.00 /cy	5,370		/cy			7,510	8,473
	Color Dye	3310.110	27.26 cy	/cy		10.00 /cy	292		/cy			292	292
	Duct Bank Rebar	3210.230	2.70 tn	39.25 /mh	3,391	1,600.00 /ton	4,320		/tn			7,711	9,237
	Duct Bank Bedding	2305.500	6.96 tn	6.00 /tn	42	30.00 /ton	209		/tn			251	269
	Tracer Tape for Duct Bank	16000.002	100.00 lf	39.25 /mh	103	0.10 /lf	10		/lf			113	160
	Ductbank L		95.00 lf		14,174		11,672			95		25,941	32,319
16-01	Ductbank M												
	Duct Bank Excavation/Backfill	16000.002	15.00 lf	39.25 /mh	201	/lf			1.00 /lf	15		216	307

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	16-01 Ductbank M												
	Duct Bank Formwork	16000.002	96.00 sf	39.25 /mh	942	2.00 /sf	192		/sf			1,134	1,558
	Duct Bank Concrete	3310.100	3.56 cy	39.25 /mh	279	197.00 /cy	701		/cy			980	1,105
	Color Dye	3310.110	3.56 cy	/cy		10.00 /cy	38		/cy			38	38
	Duct Bank Rebar	3210.230	0.40 tn	39.25 /mh	502	1,600.00 /ton	640		/tn			1,142	1,368
	Duct Bank Bedding	2305.500	1.11 tn	6.00 /tn	7	30.00 /ton	33		/tn			40	43
	Tracer Tape for Duct Bank	16000.002	15.00 lf	39.25 /mh	15	0.10 /lf	2		/lf			17	24
	Tie in Exist Manhole 0 "- 6" (into EQ Valve Vault)	2327.100	6.00 ea	39.25 /mh	942	30.00 /ea	180		/ea			1,122	1,546
	Ductbank M		15.00 lf		2,889		1,785			15		4,690	5,990
	16-01 Ductbank N												
	Duct Bank Excavation/Backfill	16000.002	15.00 lf	39.25 /mh	201	/lf			1.00 /lf	15		216	307
	Duct Bank Formwork	16000.002	96.00 sf	39.25 /mh	942	2.00 /sf	192		/sf			1,134	1,558
	Duct Bank Concrete	3310.100	3.56 cy	39.25 /mh	279	197.00 /cy	701		/cy			980	1,105
	Color Dye	3310.110	3.56 cy	/cy		10.00 /cy	38		/cy			38	38
	Duct Bank Rebar	3210.230	0.40 tn	39.25 /mh	502	1,600.00 /ton	640		/tn			1,142	1,368
	Duct Bank Bedding	2305.500	1.11 tn	6.00 /tn	7	30.00 /ton	33		/tn			40	43
	Tracer Tape for Duct Bank	16000.002	15.00 lf	39.25 /mh	15	0.10 /lf	2		/lf			17	24
	Tie in Exist Manhole 0 "- 6" (EQ Upper Level)	2327.100	4.00 ea	39.25 /mh	628	30.00 /ea	120		/ea			748	1,031
	Ductbank N		15.00 lf		2,575		1,725			15		4,316	5,474
	16-01 Ductbank P												
	Duct Bank Excavation/Backfill	16000.002	22.00 lf	39.25 /mh	295	/lf			1.00 /lf	22		317	450
	Duct Bank Formwork	16000.002	160.00 sf	39.25 /mh	1,570	2.00 /sf	320		/sf			1,890	2,597
	Duct Bank Concrete	3310.100	5.93 cy	39.25 /mh	465	197.00 /cy	1,167		/cy			1,633	1,842
	Color Dye	3310.110	5.93 cy	/cy		10.00 /cy	63		/cy			63	63
	Duct Bank Rebar	3210.230	0.60 tn	39.25 /mh	754	1,600.00 /ton	960		/tn			1,714	2,053
	Duct Bank Bedding	2305.500	1.63 tn	6.00 /tn	10	30.00 /ton	49		/tn			59	63
	Tracer Tape for Duct Bank	16000.002	22.00 lf	39.25 /mh	23	0.10 /lf	2		/lf			25	35
	Tie in Exist Clarifier 4"	2327.100	3.00 ea	39.25 /mh	471	30.00 /ea	90		/ea			561	773
	Ductbank P		22.00 lf		3,588		2,652			22		6,262	7,876
	16-01 Ductbank Q												
	Duct Bank Excavation/Backfill	16000.002	22.00 lf	39.25 /mh	295	/lf			1.00 /lf	22		317	450
	Duct Bank Formwork	16000.002	200.00 sf	39.25 /mh	1,963	2.00 /sf	400		/sf			2,363	3,246
	Duct Bank Concrete	3310.100	11.11 cy	39.25 /mh	872	197.00 /cy	2,189		/cy			3,061	3,454
	Color Dye	3310.110	11.11 cy	/cy		10.00 /cy	119		/cy			119	119
	Duct Bank Rebar	3210.230	1.10 tn	39.25 /mh	1,382	1,600.00 /ton	1,760		/tn			3,142	3,763
	Duct Bank Bedding	2305.500	2.04 tn	6.00 /tn	12	30.00 /ton	61		/tn			73	79
	Tracer Tape for Duct Bank	16000.002	22.00 lf	39.25 /mh	23	0.10 /lf	2		/lf			25	35
	Tie in New Generator	2327.100	12.00 ea	39.25 /mh	1,884	30.00 /ea	360		/ea			2,244	3,092
	Ductbank Q		22.00 lf		6,431		4,891			22		11,344	14,238
	16-01 Ductbank R												
	Duct Bank Excavation/Backfill	16000.002	62.00 lf	39.25 /mh	833	/lf			1.00 /lf	62		895	1,269
	Duct Bank Formwork	16000.002	600.00 sf	39.25 /mh	5,888	2.00 /sf	1,200		/sf			7,088	9,737
	Duct Bank Concrete	3310.100	33.33 cy	39.25 /mh	2,617	197.00 /cy	6,567		/cy			9,183	10,361
	Color Dye	3310.110	33.33 cy	/cy		10.00 /cy	357		/cy			357	357
	Duct Bank Rebar	3210.230	3.30 tn	39.25 /mh	4,145	1,600.00 /ton	5,280		/tn			9,425	11,290
	Duct Bank Bedding	2305.500	5.74 tn	6.00 /tn	34	30.00 /ton	172		/tn			207	222
	Tracer Tape for Duct Bank	16000.002	62.00 lf	39.25 /mh	64	0.10 /lf	6		/lf			70	99
	Tie in Exist Utility Transformer	2327.100	8.00 ea	39.25 /mh	1,256	30.00 /ea	240		/ea			1,496	2,061
	Tie in New Reuse PS Electrical Bldg	2327.100	8.00 ea	39.25 /mh	1,256	30.00 /ea	240		/ea			1,496	2,061
	Ductbank R		62.00 lf		16,092		14,062			62		30,216	37,457
	16-01 Ductbank EQ to Weir												
	Duct Bank Excavation/Backfill	16000.002	24.00 lf	39.25 /mh	322	/lf			1.00 /lf	24		346	491
	Duct Bank Formwork	16000.002	176.00 sf	39.25 /mh	1,727	2.00 /sf	352		/sf			2,079	2,856
	Duct Bank Concrete	3310.100	6.00 cy	39.25 /mh	471	197.00 /cy	1,182	0	0.00 /cy	0	0	1,653	1,865
	Duct Bank Bedding	2305.500	13.33 tn	6.00 /tn	80	30.00 /ton	400		/tn			480	516
	Tracer Tape for Duct Bank	16000.002	24.00 lf	39.25 /mh	25	0.10 /lf	2		/lf			27	38
	Color Dye	3310.110	6.00 cy	/cy		10.00 /cy	64		/cy			64	64
	Duct Bank Rebar	3210.230	0.60 tn	39.25 /mh	754	1,600.00 /tn	960		/tn			1,714	2,053
	Ductbank EQ to Weir		48.00 lf		3,379		2,961			24		6,363	7,884
	16-01 Ductbank GAT 141B												
	Duct Bank Excavation/Backfill	16000.002	42.00 lf	39.25 /mh	564	/lf			1.00 /lf	42		606	860
	Duct Bank Formwork	16000.002	320.00 sf	39.25 /mh	3,140	2.00 /sf	640		/sf			3,780	5,193
	Duct Bank Concrete	3310.100	11.85 cy	39.25 /mh	930	197.00 /cy	2,335		/cy			3,265	3,684
	Color Dye	3310.110	11.85 cy	/cy		10.00 /cy	127		/cy			127	127
	Duct Bank Rebar	3210.230	1.10 tn	39.25 /mh	1,382	1,600.00 /ton	1,760		/tn			3,142	3,763
	Duct Bank Bedding	2305.500	3.08 tn	6.00 /tn	18	30.00 /ton	92		/tn			111	119
	Tracer Tape for Duct Bank	16000.002	42.00 lf	39.25 /mh	43	0.10 /lf	4		/lf			48	67
	Ductbank GAT 141B		42.00 lf		6,078		4,958			42		11,078	13,813
	16-01 Ductbank C00910												
	Duct Bank Excavation/Backfill	16000.002	12.00 lf	39.25 /mh	161	/lf			1.00 /lf	12		173	246
	Duct Bank Formwork	16000.002	60.00 sf	39.25 /mh	589	2.00 /sf	120		/sf			709	974
	Duct Bank Concrete	3310.100	1.67 cy	39.25 /mh	131	197.00 /cy	328		/cy			459	518
	Color Dye	3310.110	1.67 cy	/cy		10.00 /cy	18		/cy			18	18
	Duct Bank Rebar	3210.230	0.20 tn	39.25 /mh	251	1,600.00 /ton	320		/tn			571	684
	Duct Bank Bedding	2305.500	0.67 tn	6.00 /tn	4	30.00 /ton	20		/tn			24	26
	Tracer Tape for Duct Bank	16000.002	12.00 lf	39.25 /mh	12	0.10 /lf	1		/lf			14	19

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Ductbank C00910		12.00 If		1,148		807			12		1,968	2,485
16-01	Ductbank C00920												
	Duct Bank Excavation/Backfill	16000.002	26.00 If	39.25 /mh	349	/lf			1.00 /lf	26		375	532
	Duct Bank Formwork	16000.002	144.00 sf	39.25 /mh	1,413	2.00 /sf	288		/sf			1,701	2,337
	Duct Bank Concrete	3310.100	4.00 cy	39.25 /mh	314	197.00 /cy	788		/cy			1,102	1,243
	Color Dye	3310.110	4.00 cy	/cy		10.00 /cy	43		/cy			43	43
	Duct Bank Rebar	3210.230	0.08 tn	39.25 /mh	100	1,600.00 /ton	128		/tn			228	274
	Duct Bank Bedding	2305.500	0.40 tn	6.00 /tn	2	30.00 /ton	12		/tn			14	15
	Tracer Tape for Duct Bank	16000.002	26.00 lf	39.25 /mh	27	0.10 /lf	3		/lf			29	42
	Ductbank C00920		26.00 lf		2,206		1,261			26		3,493	4,486
16-01	Ductbank GAT 141C												
	Duct Bank Excavation/Backfill	16000.002	22.00 lf	39.25 /mh	295	/lf			1.00 /lf	22		317	450
	Duct Bank Formwork	16000.002	160.00 sf	39.25 /mh	1,570	2.00 /sf	320		/sf			1,890	2,597
	Duct Bank Concrete	3310.100	4.44 cy	39.25 /mh	349	197.00 /cy	875		/cy			1,224	1,381
	Color Dye	3310.110	4.44 cy	/cy		10.00 /cy	48		/cy			48	48
	Duct Bank Rebar	3210.230	0.50 tn	39.25 /mh	628	1,600.00 /ton	800		/tn			1,428	1,711
	Duct Bank Bedding	2305.500	1.22 tn	6.00 /tn	7	30.00 /ton	37		/tn			44	47
	Tracer Tape for Duct Bank	16000.002	22.00 lf	39.25 /mh	23	0.10 /lf	2		/lf			25	35
	Ductbank GAT 141C		22.00 lf		2,872		2,082			22		4,976	6,269
16-01	Ductbank C00900												
	Duct Bank Excavation/Backfill	16000.002	22.00 lf	39.25 /mh	295	/lf			1.00 /lf	22		317	450
	Duct Bank Formwork	16000.002	120.00 sf	39.25 /mh	1,178	2.00 /sf	240		/sf			1,418	1,947
	Duct Bank Concrete	3310.100	3.33 cy	39.25 /mh	262	197.00 /cy	657		/cy			918	1,036
	Color Dye	3310.110	3.33 cy	/cy		10.00 /cy	36		/cy			36	36
	Duct Bank Rebar	3210.230	0.30 tn	39.25 /mh	377	1,600.00 /ton	480		/tn			857	1,026
	Duct Bank Bedding	2305.500	1.22 tn	6.00 /tn	7	30.00 /ton	37		/tn			44	47
	Tracer Tape for Duct Bank	16000.002	22.00 lf	39.25 /mh	23	0.10 /lf	2		/lf			25	35
	Ductbank C00900		22.00 lf		2,141		1,451			22		3,615	4,578
16-01	Ductbank C00905												
	Duct Bank Excavation/Backfill	16000.002	24.00 lf	39.25 /mh	322	/lf			1.00 /lf	24		346	491
	Duct Bank Formwork	16000.002	132.00 sf	39.25 /mh	1,295	2.00 /sf	264		/sf			1,559	2,142
	Duct Bank Concrete	3310.100	3.67 cy	39.25 /mh	288	197.00 /cy	722		/cy			1,010	1,140
	Color Dye	3310.110	3.67 cy	/cy		10.00 /cy	39		/cy			39	39
	Duct Bank Rebar	3210.230	0.40 tn	39.25 /mh	502	1,600.00 /ton	640		/tn			1,142	1,368
	Duct Bank Bedding	2305.500	1.33 tn	6.00 /tn	8	30.00 /ton	40		/tn			48	52
	Tracer Tape for Duct Bank	16000.002	24.00 lf	39.25 /mh	25	0.10 /lf	2		/lf			27	38
	Ductbank C00905		24.00 lf		2,441		1,708			24		4,173	5,271
	ELEC Electrical				134,853		116,770			50,462	17,600	319,685	380,369
	00 - SITE Site				134,853		116,770			50,462	17,600	319,685	380,369
	260544.00				134,853		116,770			50,462	17,600	319,685	380,369
310000.00	Earthwork												
	00 - SITE Site												
	DIRT Dirtwork												
	01 -100 Dirtwork General												
	Earthwork Foreman	1000.100	36.00 wk	2,000.00 /wk	72,000	/wk			/wk			72,000	104,400
	Pickup	1900.210	12.00 Mnth	/Mnth		/Mn th			1,900.00 /Mnth	22,800	6,000	28,800	28,800
	Temporary Fences at trenches and jersey barriers	1116.200	1.00 ls	/ls		25,000.00 /ls	25,000		/ls			25,000	25,000
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	7,200	3,000	10,200	10,200
	John Deere 270D Excavator (188 HP) (L)	1900.136	12.00 Mnth	/Mnth		/Mn th			8,300.00 /Mnth	99,600	34,800	134,400	134,400
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	4.00 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	13,000	2,000	15,000	15,000
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	12.00 Mnth	/Mnth		/Mn th			5,510.00 /Mnth	66,120	24,000	90,120	90,120
	(3rd Party) Semi Tractor	1900.210	216.00 Hrs	/Hrs		/Hrs		35,640	/Hrs			35,640	35,640
	Engineered/Stamped Design for Excavation at clarifiers	2317.105	1.00 ls	/ls		/ls		5,000	/ls			5,000	5,000
	Backflow Preventer Flg 4" for water truck	15403.130	1.00 ea	39.25 /mh		5,000.00 /ea	5,000		/ea			5,000	5,000
	Water Truck, 4,000 Gallon (L)	1900.210	4.00 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	20,000	4,800	24,800	24,800
	Dirtwork General				72,000		30,000	40,640		232,520	76,600	451,760	484,160
014-	Winter Conditions Dirtwork												
	Winter Conditions	1572.100	5.00 Mnth	/Mnth		2,000.00 /Mn th	10,000		/Mnth			10,000	10,000
	Labor Dirtwork Winter Protect	1572.100	5.00 Mnth	39.25 /mh	27,083	0.00 /Mn th	0		/Mnth			27,083	39,270
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mn th			3,800.00 /Mnth	3,800	2,000	5,800	5,800
	Ground Heater E2200 (ln @ 1.1 gal/hr *3 24/7) (L) ((OWNED ONLY-50% DISCOUNTED RATE)	1900.400	5.00 Mnth	/Mnth		/Mn th			4,300.00 /Mnth	21,500	19,000	40,500	40,500
	Winter Conditions Dirtwork		8.00 mo		27,083		10,000			25,300	21,000	83,383	95,570
	0212- Clear/Grub for Storm drain trailers												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0212- Clear/Grub for Storm drain trailers												
	Clear and Grub Site -Light	2314.100	0.34 ac	39.25 /mh	540	/ac			/ac			540	783
	Strip Topsoil & Haul Offsite	2314.200	250.00 sy	39.25 /mh	1,963	/sy			/sy			1,963	2,846
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.12 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,104	420	1,524	1,524
	John Deere 644 Loader (232 HP) (M)	1900.132	0.12 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	960	444	1,404	1,404
	(3rd Party) Dump Truck, 10 wheel	1900.210	73.00 Hrs	/Hrs		/Hrs		9,855	/Hrs			9,855	9,855
	Clear/Grub for Storm drain trailers		0.34 ac		2,503			9,855		2,064	864	15,286	16,412
	0234- Excavation Generator Pad												
	Excavation - Mass	2317.105	356.00 cy	39.25 /mh	4,192	/cy			/cy			4,192	6,078
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	469	179	648	648
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	408	189	597	597
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	367	153	520	520
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	255	61	316	316
	(3rd Party) Dump Truck, 10 wheel (short Haul to Pond)	1900.210	14.00 Hrs	/Hrs		/Hrs		1,890	/Hrs			1,890	1,890
	Precompact Subgrade Below Foundations	2300.600	150.00 sy	39.25 /mh	294	/sy			/sy			294	427
	Machine Grade Below Structure	2301.100	150.00 sy	39.25 /mh	294	/sy			/sy			294	427
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	156	60	216	216
	John Deere 644 Loader (232 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	136	63	199	199
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	85	20	105	105
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	55	9	64	64
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	104	28	132	132
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.02 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	65	34	99	99
	Flow Fill	3310.100	10.00 cy	/cy		180.00 /cy	1,890		/cy			1,890	1,890
	Excavation Generator Pad		356.00 cy		4,781		1,890	1,890		2,100	795	11,456	13,607
	0234- Haul Off Spoils												
	Excavation - Mass	2317.105	21,919.00 cy	39.25 /mh	15,486	/cy			/cy			15,486	22,454
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,200	3,500	12,700	12,700
	John Deere 644 Loader (232 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	8,000	3,700	11,700	11,700
	Water Truck, 4,000 Gallon (L)	1900.210	2.00 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	10,000	2,400	12,400	12,400
	(3rd Party) Dump Truck, 10 wheel (haul off 2 hour trip)	1900.210	4,870.00 Hrs	/Hrs		/Hrs		657,450	/Hrs			657,450	657,450
	Dump Fees by CY	1714.100	21,919.00 cy	/cy		10.00 /cy	219,190		/cy			219,190	219,190
	Haul Off Spoils		21,919.00 cy		15,486		219,190	657,450		27,200	9,600	928,926	935,894
	0235- Under Slab Fill Generator Slab												
	Backfill - Mass	2319.302	300.00 cy	39.25 /mh	2,473	/cy			/cy			2,473	3,585
	Import Fill - Gravel Process class 6	2305.100	300.00 bcy	/cy		25.00 /ton	13,125		/cy			13,125	13,125
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.09 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	782	298	1,080	1,080
	John Deere 644 Loader (232 HP) (M)	1900.132	0.09 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	680	315	995	995
	Water Truck, 4,000 Gallon (L)	1900.210	0.09 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	425	102	527	527
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	276	43	319	319
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	518	140	658	658
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.09 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	323	170	493	493
	Filter Fabric	2370.150	180.00 sy	39.25 /mh	707	2.00 /sy	396		/sy			1,103	1,420
	Under Slab Fill Generator Slab		300.00 cy		3,179		13,521			3,004	1,067	20,771	22,202
	0235- Backfill site (reuse Pump, EQ elect, and misc site)												
	Backfill - Mass	2319.302	500.00 cy	39.25 /mh	2,355	/cy			/cy			2,355	3,415
	Import Fill - Gravel Process class 6	2305.100	200.00 bcy	/cy		25.00 /ton	8,750		/cy			8,750	8,750
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.14 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,306	497	1,803	1,803
	John Deere 644 Loader (232 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	1,136	525	1,661	1,661
	Water Truck, 4,000 Gallon (L)	1900.210	0.14 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	710	170	880	880
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	865	234	1,100	1,100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	462	71	533	533

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0235- Backfill site (reuse Pump, EQ elect, and misc site)												
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.14 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	540	284	824	824
	(3rd Party) Dump Truck, 10 wheel	1900.210	19.00 Hrs	/Hrs		/Hrs		2,565	/Hrs			2,565	2,565
	Backfill site (reuse Pump, EQ elect, and misc site)		500.00 cy		2,355		8,750	2,565		5,019	1,782	20,471	21,531
	DIRT Dirtwork				127,386		283,351	712,400		297,208	111,708	1,532,052	1,589,376
	SITE Sitework												
	0212- Clear/Grub Site												
	Clear and Grub Site -Light	2314.100	3.71 ac	39.25 /mh	9,452	/ac			/ac			9,452	13,706
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.52 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,747	1,806	6,553	6,553
	John Deere 644 Loader (232 HP) (M)	1900.132	0.52 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	4,128	1,909	6,037	6,037
	Water Truck, 4,000 Gallon (L)	1900.210	0.52 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	2,580	619	3,199	3,199
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.52 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,961	1,032	2,993	2,993
	(3rd Party) Dump Truck, 10 wheel (2 hr round trip)	1900.210	300.00 Hrs	/Hrs		/Hrs		40,500	/Hrs			40,500	40,500
	Dump Fees by CY	1714.100	1,500.00 cy	/cy		10.00 /cy	15,000		/cy			15,000	15,000
	Dumpster Pickups	2220.980	10.00 ea	/ea		750.00 /ea	7,500		/ea			7,500	7,500
	Clear/Grub Site		3.71 ac		9,452		22,500	40,500		13,416	5,366	91,235	95,488
	0230- Final Grade Site												
	Fine Grade Site	2300.600	18,000.00 sy	39.25 /mh	56,520	/sy			/sy			56,520	81,954
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	3.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	27,600	10,500	38,100	38,100
	John Deere 644 Loader (232 HP) (M)	1900.132	2.00 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	16,000	7,400	23,400	23,400
	Water Truck, 4,000 Gallon (L)	1900.210	3.00 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	15,000	3,600	18,600	18,600
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	6,500	1,000	7,500	7,500
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	4.00 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	24,380	6,600	30,980	30,980
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	7,600	4,000	11,600	11,600
	Import Topsoil	2305.100	750.00 bcy	/cy		31.03 /ton	33,750		/cy			33,750	33,750
	Final Grade Site		18,000.00 sy		56,520		33,750			97,080	33,100	220,450	245,884
	SITE Sitework				65,972		56,250	40,500		110,496	38,466	311,685	341,372
	00 - SITE Site				193,358		339,601	752,900		407,704	150,174	1,843,737	1,930,748
	16 - EQEQUIP EQ Equipment Room												
	DIRT Dirtwork												
	0234- Excavation EQ Electric room												
	Excavation - Mass	2317.105	100.00 cy	39.25 /mh	981	/cy			/cy			981	1,423
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	524	200	724	724
	John Deere 644 Loader (232 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	456	211	667	667
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	410	171	581	581
	Precompact Subgrade Below Foundations	2300.600	100.00 sy	39.25 /mh	314	/sy			/sy			314	455
	Machine Grade Below Structure	2301.100	100.00 sy	39.25 /mh	314	/sy			/sy			314	455
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	258	98	356	356
	John Deere 644 Loader (232 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	224	104	328	328
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	140	34	174	174
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	91	14	105	105
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	171	46	217	217
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.03 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	106	56	162	162
	Excavation EQ Electric room		100.00 cy		1,609					2,380	933	4,923	5,647
	0235- Underslab fill EQ Equip Room												
	Backfill - Mass	2319.302	30.00 cy	39.25 /mh	589	/cy			/cy			589	854
	Import Fill Stone 3/4"	2305.100	30.00 bcy	/cy		38.00 /ton	1,824		/cy			1,824	1,824
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	313	119	432	432
	John Deere 644 Loader (232 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	272	126	398	398
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	170	41	211	211
	Underslab fill EQ Equip Room		30.00 cy		589		1,824			755	286	3,453	3,718
	DIRT Dirtwork				2,198		1,824			3,135	1,218	8,376	9,365

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	16 - EQEQUIP EQ Equipment Room				2,198		1,824			3,135	1,218	8,376	9,365
	20 - PC 4 Primary Clarifier 4												
	DIRT Dirtwork												
	0234- Excavation Primary Clarifier #4												
	Excavation - Mass	2317.105	9,287.00 cy	39.25 /mh	36,451	/cy			/cy			36,451	52,855
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.32 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	12,135	4,617	16,751	16,751
	John Deere 644 Loader (232 HP) (M)	1900.132	1.32 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	10,552	4,880	15,432	15,432
	John Deere 624 Loader (172 HP) (M)	1900.132	1.32 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	9,497	3,957	13,454	13,454
	Water Truck, 4,000 Gallon (L)	1900.210	1.32 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	6,595	1,583	8,178	8,178
	(3rd Party) Dump Truck, 10 wheel (short haul to pond)	1900.210	343.00 Hrs	/Hrs		/Hrs		46,305	/Hrs			46,305	46,305
	Precompact Subgrade Below Foundations	2300.600	1,500.00 sy	39.25 /mh	1,178	/sy			/sy			1,178	1,707
	Machine Grade Below Structure	2301.100	1,500.00 sy	39.25 /mh	1,178	/sy			/sy			1,178	1,707
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.09 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	782	298	1,080	1,080
	John Deere 644 Loader (232 HP) (M)	1900.132	0.09 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	680	315	995	995
	Water Truck, 4,000 Gallon (L)	1900.210	0.09 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	425	102	527	527
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	276	43	319	319
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	518	140	658	658
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.09 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	323	170	493	493
	Shoring Pile and Lagging system	2250.040	1.00 ls	39.25 /mh	9,420	/ls		280,000	/ls			289,420	293,659
	Shoring System bond	2250.040	1.00 ls	39.25 /mh		/ls		5,600	/ls			5,600	5,600
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			5,510.00 /Mnth	5,510	2,000	7,510	7,510
	Excavation Primary Clarifier #4		9,287.00 cy		48,226			331,905		47,293	18,103	445,528	467,230
	0235- Underslab Rock and minor dewatering at Primary Clarifier and West Slud												
	Backfill - Mass	2319.302	510.00 cy	39.25 /mh	3,203	/cy			/cy			3,203	4,644
	Import Fill Stone 3/4"	2305.100	450.00 bcy	/cy		/ton	38.00	27,360	/cy			27,360	27,360
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,600	1,750	6,350	6,350
	John Deere 644 Loader (232 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	4,000	1,850	5,850	5,850
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	2,500	600	3,100	3,100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	1,625	250	1,875	1,875
	Trench Excavtion 0- 4'	2333.010	580.00 lf	39.25 /mh	2,732	/lf			/lf			2,732	3,961
	PVC SDR 35 Pipe 6" Perforated	2336.422	580.00 lf	39.25 /mh	2,277	/lf	12.00	7,308	/lf			9,585	10,609
	Filter Fabric	2370.150	780.00 sy	39.25 /mh	918	/sy	2.00	1,716	/sy			2,634	3,048
	Underslab Rock and minor dewatering at Primary Clarifier and West Slud		510.00 cy		9,130		36,384			12,725	4,450	62,689	66,797
	0235- Backfill Primary Clarifier 4												
	Backfill - Mass	2319.302	3,263.00 cy	39.25 /mh	23,053	/cy			/cy			23,053	33,427
	Import Fill Stone 3/4"	2305.100	300.00 bcy	/cy		/ton	38.00	18,240	/cy			18,240	18,240
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.75 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	6,900	2,625	9,525	9,525
	John Deere 644 Loader (232 HP) (M)	1900.132	0.75 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	6,000	2,775	8,775	8,775
	Water Truck, 4,000 Gallon (L)	1900.210	0.75 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	3,750	900	4,650	4,650
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	12,190	3,300	15,490	15,490
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.75 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	2,438	375	2,813	2,813
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.75 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	2,850	1,500	4,350	4,350
	(3rd Party) Dump Truck, 10 wheel (short haul from pond)	1900.210	121.00 Hrs	/Hrs		/Hrs		16,335	/Hrs			16,335	16,335
	John Deere 624 Loader (172 HP) (M)	1900.132	0.75 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	5,400	2,250	7,650	7,650
	Backfill Primary Clarifier 4		3,263.00 cy		23,053		18,240	16,335		39,528	13,725	110,881	121,254
	DIRT Dirtwork				80,409		54,624	348,240		99,545	36,278	619,097	655,281
	20 - PC 4 Primary Clarifier 4				80,409		54,624	348,240		99,545	36,278	619,097	655,281
	23 - WPS PS West Primary Sludge Pump Station												
	DIRT Dirtwork												
	0234- Excavation Primary Sludge Pump Station												
	Excavation - Mass	2317.105	2,763.00 cy	39.25 /mh	10,845	/cy			/cy			10,845	15,725
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.39 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,606	1,372	4,978	4,978
	John Deere 644 Loader (232 HP) (M)	1900.132	0.39 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	3,136	1,450	4,586	4,586

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0234- Excavation Primary Sludge Pump Station												
	John Deere 624 Loader (172 HP) (M)	1900.132	0.39 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	2,822	1,176	3,998	3,998
	Water Truck, 4,000 Gallon (L)	1900.210	0.39 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,960	470	2,430	2,430
	(3rd Party) Dump Truck, 10 wheel (short Haul to Pond)	1900.210	103.00 Hrs	/Hrs		/Hrs		13,905	/Hrs			13,905	13,905
	Precompact Subgrade Below Foundations	2300.600	311.00 sy	39.25 /mh	488	/sy			/sy			488	708
	Machine Grade Below Structure	2301.100	311.00 sy	39.25 /mh	488	/sy			/sy			488	708
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	322	123	445	445
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	280	130	410	410
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	175	42	217	217
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	114	18	131	131
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	213	58	271	271
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	133	70	203	203
	Excavation Primary Sludge Pump Station		2,763.00 cy		11,821			13,905		12,762	4,908	43,396	48,716
	0235- Backfill West Primary Sludge Pump Station												
	Backfill - Mass	2319.302	1,487.00 cy	39.25 /mh	14,591	/cy			/cy			14,591	21,157
	Import Fill Stone 3/4"	2305.100	200.00 bcy	/cy		38.00 /ton	12,160		/cy			12,160	12,160
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.42 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,882	1,477	5,359	5,359
	John Deere 644 Loader (232 HP) (M)	1900.132	0.42 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	3,376	1,561	4,937	4,937
	Water Truck, 4,000 Gallon (L)	1900.210	0.42 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	2,110	506	2,616	2,616
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.42 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	2,572	696	3,268	3,268
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.42 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	1,372	211	1,583	1,583
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.42 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,604	844	2,448	2,448
	(3rd Party) Dump Truck, 10 wheel (short haul form pond)	1900.210	56.00 Hrs	/Hrs		/Hrs		7,560	/Hrs			7,560	7,560
	Backfill West Primary Sludge Pump Station		1,487.00 cy		14,591		12,160	7,560		14,916	5,296	54,523	61,089
	DIRT Dirtwork				26,413			21,465		27,677	10,204	97,919	109,805
	23 - WPS PS West Primary Sludge Pump Station				26,413		12,160	21,465		27,677	10,204	97,919	109,805
	25 - EQ EQ Basins												
	DIRT Dirtwork												
	0234- Excavation EQ Basin and Berm												
	Excavation - Mass	2317.105	9,816.00 cy	39.25 /mh	30,822	/cy			/cy			30,822	44,692
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.39 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	12,825	4,879	17,704	17,704
	John Deere 644 Loader (232 HP) (M)	1900.132	1.39 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	11,152	5,158	16,310	16,310
	John Deere 624 Loader (172 HP) (M)	1900.132	1.39 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	10,037	4,182	14,219	14,219
	Water Truck, 4,000 Gallon (L)	1900.210	1.39 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	6,970	1,673	8,643	8,643
	Precompact Subgrade Below Foundations	2300.600	2,200.00 sy	39.25 /mh	1,727	/sy			/sy			1,727	2,504
	Machine Grade Below Structure	2301.100	2,200.00 sy	39.25 /mh	1,727	/sy			/sy			1,727	2,504
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,150	438	1,588	1,588
	John Deere 644 Loader (232 HP) (M)	1900.132	0.13 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	1,000	463	1,463	1,463
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	406	63	469	469
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	762	206	968	968
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.13 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	475	250	725	725
	(3rd Party) Dump Truck, 10 wheel (short Haul to Pond)	1900.210	363.00 Hrs	/Hrs		/Hrs		49,005	/Hrs			49,005	49,005
	Excavation EQ Basin and Berm		9,816.00 cy		34,276			49,005		44,777	17,310	145,368	160,793
	0235- Underslab rock at EQ Basin												
	Backfill - Mass	2319.302	536.00 cy	39.25 /mh	2,525	/cy			/cy			2,525	3,661
	Import Fill Stone 3/4"	2305.100	536.00 bcy	/cy		38.00 /ton	32,589		/cy			32,589	32,589
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	938	357	1,295	1,295
	John Deere 644 Loader (232 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	816	377	1,193	1,193
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	734	306	1,040	1,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	510	122	632	632

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0235- Underslab rock at EQ Basin												
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	332	51	383	383
	Underslab rock at EQ Basin		536.00 cy		2,525		32,589			3,330	1,214	39,657	40,794
	0235- Backfill EQ Basins and Berm												
	Backfill - Mass	2319.302	3,365.00 cy	39.25 /mh	19,811	/cy			/cy			19,811	28,727
	Import Fill - Gravel Process class 6	2305.100	300.00 bcy	/cy		25.00 /ton	13,125		/cy			13,125	13,125
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.96 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	8,795	3,346	12,141	12,141
	John Deere 644 Loader (232 HP) (M)	1900.132	0.96 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	7,648	3,537	11,185	11,185
	Water Truck, 4,000 Gallon (L)	1900.210	0.96 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	4,780	1,147	5,927	5,927
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	12,190	3,300	15,490	15,490
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.96 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	3,107	478	3,585	3,585
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.96 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,633	1,912	5,545	5,545
	(3rd Party) Dump Truck, 10 wheel (short Haul from Pond)	1900.210	125.00 Hrs	/Hrs		/Hrs		16,875	/Hrs			16,875	16,875
	Backfill EQ Basins and Berm		3,365.00 cy		19,811		13,125	16,875		40,153	13,720	103,685	112,600
	DIRT Dirtwork				56,612		45,714	65,880		88,260	32,245	288,711	314,186
	25 - EQ EQ Basins				56,612		45,714	65,880		88,260	32,245	288,711	314,186
	25 - EQRVV EQ Return Valve Vault												
	DIRT Dirtwork												
	0234- Excavation EQ Valve Vault												
	Excavation - Mass	2317.105	758.00 cy	39.25 /mh	2,975	/cy			/cy			2,975	4,314
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.11 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	994	378	1,372	1,372
	John Deere 644 Loader (232 HP) (M)	1900.132	0.11 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	864	400	1,264	1,264
	John Deere 624 Loader (172 HP) (M)	1900.132	0.11 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	778	324	1,102	1,102
	Water Truck, 4,000 Gallon (L)	1900.210	0.11 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	540	130	670	670
	Precompact Subgrade Below Foundations	2300.600	75.00 sy	39.25 /mh	147	/sy			/sy			147	213
	Machine Grade Below Structure	2301.100	75.00 sy	39.25 /mh	147	/sy			/sy			147	213
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	193	74	267	267
	John Deere 644 Loader (232 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	168	78	246	246
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	105	25	130	130
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	68	11	79	79
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	128	35	163	163
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.02 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	80	42	122	122
	(3rd Party) Dump Truck, 10 wheel	1900.210	28.00 Hrs	/Hrs		/Hrs		3,780	/Hrs			3,780	3,780
	Excavation EQ Valve Vault		758.00 cy		3,270			3,780		3,917	1,495	12,462	13,933
	0235- Underslab Rock EQ Valve Vault												
	Backfill - Mass	2319.302	20.00 cy	39.25 /mh	628	/cy			/cy			628	911
	Import Fill Stone 3/4"	2305.100	20.00 bcy	/cy		38.00 /ton	1,216		/cy			1,216	1,216
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	184	70	254	254
	John Deere 644 Loader (232 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	160	74	234	234
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	144	60	204	204
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	100	24	124	124
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	65	10	75	75
	Underslab Rock EQ Valve Vault		20.00 cy		628		1,216			653	238	2,735	3,018
	0235- Backfill EQ Valve Vault												
	Backfill - Mass	2319.302	563.00 cy	39.25 /mh	5,524	/cy			/cy			5,524	8,010
	Import Fill Stone 3/4"	2305.100	30.00 bcy	/cy		38.00 /ton	1,824		/cy			1,824	1,824
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.16 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,472	560	2,032	2,032
	John Deere 644 Loader (232 HP) (M)	1900.132	0.16 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	1,280	592	1,872	1,872
	Water Truck, 4,000 Gallon (L)	1900.210	0.16 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	800	192	992	992
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.16 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	520	80	600	600
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.16 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	975	264	1,239	1,239

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0235- Backfill EQ Valve Vault												
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.16 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	608	320	928	928
	(3rd Party) Dump Truck, 10 wheel (short haul from pond)	1900.210	21.00 Hrs	/Hrs		/Hrs		2,835	/Hrs			2,835	2,835
	Backfill EQ Valve Vault		563.00 cy		5,524		1,824	2,835		5,655	2,008	17,847	20,333
	DIRT Dirtwork				9,422		3,040	6,615		10,226	3,741	33,043	37,283
	25 - EQRVV EQ Return Valve Vault				9,422		3,040	6,615		10,226	3,741	33,043	37,283
	27 - ODOR Odor Control												
	DIRT Dirtwork												
	0234- Excavation Odor Control												
	Excavation - Mass	2317.105	1,336.00 cy	39.25 /mh	7,341	/cy			/cy			7,341	10,645
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.19 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,748	665	2,413	2,413
	John Deere 644 Loader (232 HP) (M)	1900.132	0.19 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	1,520	703	2,223	2,223
	John Deere 624 Loader (172 HP) (M)	1900.132	0.19 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,368	570	1,938	1,938
	Water Truck, 4,000 Gallon (L)	1900.210	0.19 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	950	228	1,178	1,178
	(3rd Party) Dump Truck, 10 wheel (short Haul to Pond)	1900.210	50.00 Hrs	/Hrs		/Hrs		6,750	/Hrs			6,750	6,750
	Precompact Subgrade Below Foundations	2300.600	320.00 sy	39.25 /mh	377	/sy			/sy			377	546
	Machine Grade Below Structure	2301.100	320.00 sy	39.25 /mh	377	/sy			/sy			377	546
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.36 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,349	1,274	4,623	4,623
	John Deere 644 Loader (232 HP) (M)	1900.132	0.36 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	2,912	1,347	4,259	4,259
	Water Truck, 4,000 Gallon (L)	1900.210	0.36 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,820	437	2,257	2,257
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.36 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	1,183	182	1,365	1,365
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.36 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	2,219	601	2,819	2,819
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.36 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,383	728	2,111	2,111
	Excavation Odor Control		1,336.00 cy		8,095			6,750		18,452	6,734	40,031	43,673
	0235- Underslab Fill Odor Control Building												
	Backfill - Mass	2319.302	600.00 cy	39.25 /mh	8,243	/cy			/cy			8,243	11,952
	Import Fill - Gravel Process class 6	2305.100	600.00 bcy	/cy		25.00 /ton	26,250		/cy			26,250	26,250
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,564	595	2,159	2,159
	John Deere 644 Loader (232 HP) (M)	1900.132	0.17 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	1,360	629	1,989	1,989
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	850	204	1,054	1,054
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	553	85	638	638
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.17 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	1,036	281	1,317	1,317
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.17 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	646	340	986	986
	Underslab Fill Odor Control Building		600.00 cy		8,243		26,250			6,009	2,134	42,635	46,344
	DIRT Dirtwork				16,337		26,250	6,750		24,460	8,868	82,665	90,017
	27 - ODOR Odor Control				16,337		26,250	6,750		24,460	8,868	82,665	90,017
	45 - RELEC Reuse Electrical Room												
	DIRT Dirtwork												
	0234- Excavation Reuse Pump Station												
	Excavation - Mass	2317.105	308.00 cy	39.25 /mh	2,176	/cy			/cy			2,176	3,155
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	405	154	559	559
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	352	163	515	515
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	317	132	449	449
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	220	53	273	273
	Precompact Subgrade Below Foundations	2300.600	150.00 sy	39.25 /mh	177	/sy			/sy			177	256
	Machine Grade Below Structure	2301.100	150.00 sy	39.25 /mh	177	/sy			/sy			177	256
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	156	60	216	216
	John Deere 644 Loader (232 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	136	63	199	199
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	85	20	105	105
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	55	9	64	64
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			6,095.00 /Mnth	104	28	132	132

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0234- Excavation Reuse Pump Station												
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.02 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	65	34	99	99
	Excavation Reuse Pump Station		308.00 cy		2,529					1,894	715	5,139	6,277
	0235- Underslab Rock Reuse Electric Room												
	Backfill - Mass	2319.302	50.00 cy	39.25 /mh	628	/cy			/cy			628	911
	Import Fill Stone 3/4"	2305.100	50.00 bcy	/cy		38.00 /ton	3,040		/cy			3,040	3,040
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	313	119	432	432
	John Deere 644 Loader (232 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	272	126	398	398
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	170	41	211	211
	Underslab Rock Reuse Electric Room		30.00 cy		628		3,040			755	286	4,708	4,991
	DIRT Dirtwork				3,157		3,040			2,649	1,001	9,847	11,268
	45 - RELEC Reuse Electrical Room				3,157		3,040			2,649	1,001	9,847	11,268
	310000.00 Earthwork				387,907		486,253	1,201,850		663,657	243,728	2,983,395	3,157,953
312319.00	Dewatering												
00 - SITE	Site												
DIRT	Dirtwork												
	0238-3 Construction Dewatering												
	Pea Gravel for dewatering 3/8"	2305.050	180.00 cy	/cy		31.00 /ton	10,463		/cy			10,463	10,463
	PVC Sch 80 PIPE 3" PE	15211.203	660.00 lf	39.25 /mh	5,440	7.60 /lf	5,016		/lf			10,456	12,904
	PVC Sch 80 CPLG 3" T	15211.233	12.00 ea	39.25 /mh	99	25.20 /ea	302		/ea			401	446
	PVC Sch 80 90 EL 3" S	15211.207	12.00 ea	39.25 /mh	99	16.60 /ea	199		/ea			298	343
	PVC Sch 80 Straight CPLG 3" S	15211.204	33.00 ea	39.25 /mh	272	12.60 /ea	416		/ea			688	810
	PVC Valve Ball True Union Viton 3" S	15211.310	12.00 ea	39.25 /mh	99	203.00 /ea	2,436		/ea			2,535	2,579
	PVC Sch 80 Vanstones	15211.202	12.00 ea	39.25 /mh	141	15.00 /ea	180		/ea			321	385
	PVC Valve Swing Check 3"	15211.350	12.00 ea	39.25 /mh	118	350.00 /ea	4,200		/ea			4,318	4,371
	HD PE Pipe 6 DR 17	2631.301	1,250.00 lf	39.25 /mh	5,888	10.00 /lf	13,125		/lf			19,013	21,662
	HD PE 90 bend 6 DR 17	2631.314	6.00 ea	39.25 /mh	212	75.00 /ea	450		/ea			662	757
	HD PE 45 bend 6 DR 17	2631.314	2.00 ea	39.25 /mh	63	75.00 /ea	150		/ea			213	241
	HD PE Tee 6 DR 17	2631.320	12.00 ea	39.25 /mh	424	85.00 /ea	1,020		/ea			1,444	1,635
	HD PE Reducer 06 x 03 DR 17	2631.330	12.00 ea	39.25 /mh	236	65.00 /ea	780		/ea			1,016	1,121
	HD PE Pipe Cap 6 DR 17	2631.350	1.00 ea	39.25 /mh	20	80.00 /ea	80		/ea			100	108
	NBG Kit 125# Steel 3in	15125.010	12.00 ea	39.25 /mh	141	25.00 /ea	300		/ea			441	505
	Dewatering Set Up	2240.050	1.00 ls	39.25 /mh	6,280	/ls			/ls			6,280	9,106
	Dewatering Maintenance	2240.050	52.00 wk	39.25 /mh	8,164	/wk			/wk			8,164	11,838
	Dewatering Permit	2240.050	1.00 ls	/ls		/ls			/ls		1,700	1,700	1,700
	Dewatering Discharge Testing	2240.050	52.00 ea	/ea		/ea			/ea		3,640	3,640	3,640

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
00 - SITE	Site												
	SITE Sitework												
	0255- Asphalt - Plant Roads												
	Asphalt	2740.850	2,300.00 sy	/sy		/sy		350,000	/sy			350,000	350,000
	Asphalt Subcont. Mobilization	2740.840	1.00 ls	/ls		/ls			/ls				
	Asphalt Subcont. Bond	2740.840	1.00 ls	/ls		/ls			/ls				
	Asphalt Striping	2740.840	1.00 ls	/ls		/ls		1,500	/ls			1,500	1,500
	Proof Roll/Regrade Asphalt Subgrade	2740.840	2,300.00 sy	/sy		/sy		0	/sy				
	Asphalt - Plant Roads							351,500				351,500	351,500
	SITE Sitework							351,500				351,500	351,500
	00 - SITE Site							351,500				351,500	351,500
	321215.00 Asphaltic Concrete Paving							351,500				351,500	351,500
323100.00	Fences & Gates												
00 - SITE	Site												
	SITE Sitework												
	0291- Chain Link Fencing (mci)												
	6' Chain Link Fence	2820.006	1,750.00 lf	/lf		/lf		0	/lf				
	6' Fence Man Gate	2820.006	1.00 ea	/ea		/ea		0	/ea				
	6' Fence Vehicle Gate 12'	2820.006	2.00 ea	/ea		/ea		0	/ea				
	3 Strand Barb Wire @ Top Add	2820.006	1,750.00 lf	/lf		/lf		0	/lf				
	Automated Fence Card Reader	2820.980	3.00 ea	/ea		/ea		15,000	/ea			15,000	15,000
	Sub - Fencing	2345.310	1.00 ls	/ls		/ls		155,000	/ls			155,000	155,000
	Chain Link Fencing (mci)		1,750.00 lf					170,000				170,000	170,000
	SITE Sitework							170,000				170,000	170,000
	00 - SITE Site							170,000				170,000	170,000
	323100.00 Fences & Gates							170,000				170,000	170,000
329223.00	Sodding												
00 - SITE	Site												
	SITE Sitework												
	0298- Site Landscaping												
	Sub - Landscaping	2322.020	1.00 ls	/ls		/ls		251,000	/ls		50,000	301,000	301,000
	Demo Trees	2322.030	26.00 ea	39.25 /mh	3,062	/ea		0	50.00 /mh	1,300		4,362	5,739
	Spread Organic Compost	2322.040	380.00 cy	39.25 /mh		0.00 /cy	0		/cd				
	Machine Rake	2322.040	0.50 ac	/ac		/ac		0	/ac				
	Mulch - Stone	2305.150	300.00 tn	/tn		/tn		0	/tn				
	Weed Barrier - Polyethylene	2322.050	2,000.00 sy	/sy		/sy		0	/sy				
	Hydroseeding	2322.060	2.10 ac	/ac		/ac		0	/ac				
	Fertilizer	2322.060	100.00 lb	/lb		/lb		0	/lb				
	Sod In Place	2322.060	18,711.00 sf	/sf		/sf		0	/sf				
	Water Maintenance for Landscaping	2322.060	1.00 ls	39.25 /mh	4,710	/ls	5,000.00	5,000	/ls			9,710	11,830
	Trees - Expensive Species	2322.090	26.00 ea	/ea		/ea		0	/ea				
	Trees - Guying	2322.090	26.00 ea	/ea		/ea		0	/ea				
	Trees - Maintenance	2322.090	26.00 ea	/ea		/ea		0	/ea				
	Seeding Mechanical Methods (Dry Land)	2322.060	2.00 ac	/ac		/ac		0	/ac				
	Site Landscaping				7,772		5,000	251,000		1,300	50,000	315,072	318,569
	SITE Sitework				7,772		5,000	251,000		1,300	50,000	315,072	318,569
	00 - SITE Site				7,772		5,000	251,000		1,300	50,000	315,072	318,569
	329223.00 Sodding				7,772		5,000	251,000		1,300	50,000	315,072	318,569
330512.00	Temporary Bypass Pumping												
00 - SITE	Site												
	PIPE Pipe												
	02604- 36" Pe (Profile B)												
	Line Stop 36" PC2 Effluent	2240.050	1.00 ls	/ls		/ls		38,640	/ls			38,640	38,640
	36" Pe (Profile B)							38,640				38,640	38,640
	02605- 24" PE (profile C)												
	Line Stop 36" PC2 Effluent	2240.050	1.00 ls	/ls		/ls		47,100	/ls			47,100	47,100
	24" PE (profile C)							47,100				47,100	47,100
11-01 33_05_12	Temporary Bypass pumping& Plant start Up												
	Bypass Pumping 14" Willow run East tie in .75 MGD	2240.150	1.00 ls	39.25 /mh	2,512	/ls		28,000	/ls		2,000	32,512	33,642
	Bypass Pumping 14" willow Run West Manhole Tie In	2240.150	1.00 ls	39.25 /mh	6,280	/ls		34,000	/ls		2,000	42,280	45,106
	Bypass Pumping 14" willow rum MH Plug	2240.150	1.00 ls	39.25 /mh	6,280	/ls		47,000	/ls		2,000	55,280	58,106
	EQ Pump station Emergency Bypass to Existing EQ Basin	2240.150	1.00 ls	39.25 /mh	2,512	/ls		57,000	/ls		2,000	61,512	62,642
	EQ Return Valvce vault Start Up pumping PC4 to EQ Basin	2240.150	1.00 ls	39.25 /mh	2,512	/ls		42,000	/ls		2,000	46,512	47,642

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
11-01	33_05_12 Temporary Bypass pumping& Plant start Up												
	EQ Pump Station 18" Temp line to Wet Well @ Start up	2240.150	1.00 ls	39.25 /mh	2,512	/ls		9,000	/ls		2,000	13,512	14,642
	Pump Station 18" Line to Splitter Box Commissioning	2240.150	1.00 ls	39.25 /mh	2,512	/ls		18,200	/ls		2,000	22,712	23,842
	EQ Pump Station 18" Temp linne to Splitter Box EQ line Abandon caps	2240.150	1.00 ls	39.25 /mh	2,512	/ls		18,200	/ls		2,000	22,712	23,842
	33_05_12 Temporary Bypass pumping& Plant start Up				27,632			253,400			16,000	297,032	309,466
	PIPE Pipe				27,632			339,140			16,000	382,772	395,206
	00 - SITE Site				27,632			339,140			16,000	382,772	395,206
	330512.00 Temporary Bypass Pumping				27,632			339,140			16,000	382,772	395,206
400500.03	Pipe Identification												
	00 - GEN General												
	GEN General												
	01 -100 Mechanical general conditions interior Interior Pipe and Equipment												
	Mechanical Foreman	1000.100	16.00 wk	2,000.00 /wk	32,000	/wk			/wk			32,000	46,400
	Pickup	1900.210	8.00 Mnth	/Mnth		/Mnth			1,900.00 /Mnth	15,200	4,000	19,200	19,200
	Scaffolding	1900.300	1.00 ls	/ls		2,500.00 /ls	2,500		/ls			2,500	2,500
	shop drawings interior DIP	1642.100	1.00 ls	/ls		/ls			/ls		6,000	6,000	6,000
	Engineering calcs for pipe supports	1630.100	1.00 ls	/ls		/ls		22,400	/ls			22,400	22,400
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	6.00 mnth	8,800.00 /mnth	52,800	450.00 /mnth	2,700		10,400.00 /mnth	62,400	16,800	134,700	158,460
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	4.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	6,000	400	6,400	6,400
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	5.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	22,500	7,500	30,000	30,000
	Welding - Stainless Misc shop time	5000.985	80.00 hrs	39.25 /mh	3,140	/hrs		12,000	/hrs			15,140	16,553
	Mechanical general conditions interior Interior Pipe and Equipment				87,940		5,200	34,400		106,100	34,700	268,340	307,913
	GEN General				87,940		5,200	34,400		106,100	34,700	268,340	307,913
	00 - GEN General				87,940		5,200	34,400		106,100	34,700	268,340	307,913
	00 - SITE Site												
	GEN General												
	01 -100 Mechanical General Conditions for site piping Underground												
	Mechanical Foreman	1000.100	24.00 wk	2,000.00 /wk	48,000	/wk			/wk			48,000	69,600
	Pickup	1900.210	7.00 Mnth	/Mnth		/Mnth			1,900.00 /Mnth	13,300	3,500	16,800	16,800
	Temporary Fences for excavations	1116.200	1.00 ls	/ls		/ls		25,000	/ls			25,000	25,000
	Pot Hole Existing (utility locates)	2333.010	1.00 ls	39.25 /mh	3,140	/ls		91,000	/ls			94,140	95,553
	Sub - Traffic Control and signage (temp road during piping)	2800.180	1.00 ls	39.25 /mh	6,280	25,000.00 /ls	25,000		/mh			31,280	34,106
	Disinfection/Chlorination of PW (Enter Line Size)	1166.100	1.00 ea	39.25 /mh	1,884	2,500.00 /ea	2,500		/ea			4,384	5,232
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	9,000	3,000	12,000	12,000
	3rd Party Crane w Operator ??? Ton - Rent	1900.100	2.00 ea	/ea		/ea		10,000	/ea			10,000	10,000
	Mechanical General Conditions for site piping Underground				59,304		27,500	126,000		22,300	6,500	241,604	268,291
	GEN General				59,304		27,500	126,000		22,300	6,500	241,604	268,291
	00 - SITE Site				59,304		27,500	126,000		22,300	6,500	241,604	268,291
	400500.03 Pipe Identification				147,244		32,700	160,400		128,400	41,200	509,944	576,204
400506.55	Piping Insulation												
	00 - SITE Site												
	PIPE Pipe												
	150-01 1c 12042002 Insulation sub contracor for process piping												
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls		80,000	/ls			80,000	80,000
	heat trace Subcontractor	16000.001	1.00 ls	/ls		/ls		161,900	/ls			161,900	161,900
	Insulation sub contracor for process piping							241,900				241,900	241,900
	PIPE Pipe							241,900				241,900	241,900
	00 - SITE Site							241,900				241,900	241,900
	400506.55 Piping Insulation							241,900				241,900	241,900
400507.01	Pipe Supports												
	00 - SITE Site												
	PIPE Pipe												
	150-610 Supply pipe support Package												
	Supply Support package	15233.505	1.00 ls	/ls		/ls		256,708	/ls			256,708	256,708
	Supply pipe support Package							256,708				256,708	256,708
	PIPE Pipe							256,708				256,708	256,708
	00 - SITE Site							256,708				256,708	256,708
	400507.01 Pipe Supports							256,708				256,708	256,708
400519.01	Ductile Iron Pipe												
	00 - SITE Site												
	PIPE Pipe												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02643- Primary Influant DI RJ CL350 CM 00C21 weir to Clarifyer #4												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 8-10'	2333.010	12.00 lf	39.25 /mh	75	/lf			/lf			75	109
	Trench Excavtion 18-20	2333.010	102.00 lf	39.25 /mh	1,201	/lf			/lf			1,201	1,742
	Trench Excavtion 16-18'	2333.010	51.00 lf	39.25 /mh	701	/lf			/lf			701	1,016
	Trench Backfill 8-10'	2333.020	12.00 lf	39.25 /mh	99	/lf			/lf			99	143
	Trench Backfill 18-20	2333.020	102.00 lf	39.25 /mh	1,441	/lf			/lf			1,441	2,090
	Trench Backfill 16-18'	2333.020	51.00 lf	39.25 /mh	701	/lf			/lf			701	1,016
	Trench Box 10' Deep	2333.030	12.00 lf	/lf		/lf			65.00 /lf	780		780	780
	Trench Box 20' Deep	2333.030	102.00 lf	/lf		/lf			65.00 /lf	6,630		6,630	6,630
	Utility Bedding Peastone	2305.200	137.08 bcy	/cy		30.00 /ton	6,580		/cy			6,580	6,580
	Trench Box 18' Deep	2333.030	51.00 lf	/lf		/lf			65.00 /lf	3,315		3,315	3,315
	Spoils to Waste	2333.060	208.67 cy	39.25 /mh	819	/cy			/cy			819	1,188
	Utility Bedding Peastone	2305.200	49.99 bcy	/cy		30.00 /ton	2,400		/cy			2,400	2,400
	DI Pipe RJ - Class 350 36	2511.401	165.00 lf	39.25 /mh	1,813	551.00 /lf	95,461		/lf			97,274	98,090
	DI RJ CL 350 45 36	2511.414	3.00 ea	39.25 /mh	942	7,547.00 /ea	22,641		/ea			23,583	24,007
	DI RJ CL 350 90 36	2511.414	1.00 ea	39.25 /mh	314	10,485.00 /ea	10,485		/ea			10,799	10,940
	DI RJ CL 350 Cap 36	2511.410	2.00 ea	39.25 /mh	628	5,544.00 /ea	11,088		/ea			11,716	11,999
	DI RJ CL 350 Solid Sleeve Long 36	2511.422	2.00 ea	39.25 /mh	628	5,699.00 /ea	11,398		/ea			12,026	12,309
	Polybag 36" and smaller	2333.090	165.00 lf	39.25 /mh	65	5.40 /lf	980		/lf			1,045	1,074
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,600	1,750	6,350	6,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	2,500	600	3,100	3,100
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			400.00 /Mnth	200	50	250	250
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	1,625	250	1,875	1,875
	Pot Hole Existing CST lines	2333.010	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Support Existing CST lines	2333.010	2.00 ea	39.25 /mh	628	50.00 /ea	100		/ea			728	1,011
	Warning Tape Detectable	2333.080	180.00 lf	39.25 /mh	71	0.12 /lf	22		/lf			92	124
	Tracer Wire	2333.080	180.00 lf	39.25 /mh	71	1.52 /lf	301		/lf			372	403
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	79	95.00 /ea	190		/ea			269	304
	DI Wall Pipe MJ x PE w/ Collar 36in x 2ft 6in long	15221.344	1.00 ea	39.25 /mh	628	9,864.00 /ea	9,864		/ea			10,492	10,775
	DI MEGALUG for DIP 36"	2511.610	16.00 ea	39.25 /mh		1,968.00 /ea	31,488		/ea			31,488	31,488
	DI Joint Restraint - 36"	2511.050	10.00 ea	39.25 /mh	1,570	3,392.00 /ea	33,920		/ea			35,490	36,197
	DI Floor Pipe FLG x MJ w/ Collar 36in x 2ft 0in long	15221.232	1.00 ea	39.25 /mh	628	8,265.00 /ea	8,265		/ea			8,893	9,176
	Trenton wax tape, 6" x 9' Roll	2333.100	26.00 ea	39.25 /mh	2,041	57.00 /ea	1,482		/ea			3,523	4,441
	Poly Wrap for restraints	7260.100	93.00 LF	39.25 /mh	7	4.90 /LF	488		/LF			495	498
	Poly Tape	2333.090	4.00 roll	/roll		8.00 /roll	35		/roll			35	35
	Flow Fill at pipe crossings	3310.100	2.00 cy	39.25 /mh	942	180.00 /cy	378		/cy			1,320	1,744
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	3.00 ea	39.25 /mh		80.00 /ea	240		/ea			240	240
	Primary Influant DI RJ CL350 CM 00C21 weir to Clarifyer #4		165.00 lf		17,347		247,854			23,300	4,150	292,652	300,458
	02643- 6" PS/PSC 00C21 for east to west pump station CL 350 glass lined												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 6- 8'	2333.010	77.00 lf	39.25 /mh	604	/lf			/lf			604	876
	Trench Backfill 6- 8'	2333.020	77.00 lf	39.25 /mh	907	/lf			/lf			907	1,315
	Utility Bedding Peastone	2305.200	11.13 bcy	/cy		30.00 /ton	534		/cy			534	534
	Spoils to Waste	2333.060	11.41 cy	39.25 /mh	45	/cy			/cy			45	65
	DI Pipe RJ - Class 350 Glass Lined 6"	2511.401	77.00 lf	39.25 /mh	604	108.00 /lf	8,732		/lf			9,336	9,608
	DI RJ Cl 350 Glass Lined 45 6	2511.414	6.00 ea	39.25 /mh	471	669.00 /ea	4,014		/ea			4,485	4,697
	Polybag 12" and Smaller	2333.090	77.00 lf	39.25 /mh	30	2.50 /lf	212		/lf			242	256
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Cross Existing	2333.010	8.00 ea	39.25 /mh	628	500.00 /ea	4,000		/ea			4,628	4,911
	Support Existing	2333.010	8.00 ea	39.25 /mh	1,256	50.00 /ea	400		/ea			1,656	2,221
	Warning Tape Detectable	2333.080	100.00 lf	39.25 /mh	39	0.12 /lf	12		/lf			51	69
	Tracer Wire	2333.080	100.00 lf	39.25 /mh	39	1.52 /lf	167		/lf			206	224
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for DIP 6"	2511.610	18.00 ea	39.25 /mh		106.00 /ea	1,908		/ea			1,908	1,908
	DI Joint Restraint - 6"	2511.050	5.00 ea	39.25 /mh	393	102.00 /ea	510		/ea			903	1,079
	DI MJ Compact Cap 8	2511.310	2.00 ea	39.25 /mh	157	555.00 /ea	1,110		/ea			1,267	1,338
	DI MJ Compact Solid Sleeve Long 6	2511.322	2.00 ea	39.25 /mh	157	346.00 /ea	692		/ea			849	920
	Trenton wax tape, 6" x 9' Roll	2333.100	4.00 ea	39.25 /mh	628	57.00 /ea	228		/ea			856	1,139
	Poly Wrap for restraints	7260.100	8.00 LF	39.25 /mh	1	4.90 /LF	42		/LF			43	43
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	6.00 cy	/cy		180.00 /cy	1,134		/cy			1,134	1,134
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	6" PS/PSC 00C21 for east to west pump station CL 350 glass lined		77.00 lf		6,901		24,024			6,313	2,075	39,312	42,418
	02643- 8" PS from clar 3# to west pump station 00C21 CL 350 glass lined												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 8-10'	2333.010	38.00 lf	39.25 /mh	447	/lf			/lf			447	649
	Trench Excavtion 16-18'	2333.010	18.00 lf	39.25 /mh	353	/lf			/lf			353	512
	Trench Backfill 8-10'	2333.020	38.00 lf	39.25 /mh	746	/lf			/lf			746	1,081
	Trench Backfill 16-18'	2333.020	18.00 lf	39.25 /mh	530	/lf			/lf			530	768
	Trench Box 18' Deep	2333.030	40.00 lf	/lf		/lf			65.00 /lf	2,600		2,600	2,600
	Utility Bedding Peastone	2305.200	18.31 bcy	/cy		30.00 /ton	879		/cy			879	879
	Spoils to Waste	2333.060	18.67 cy	39.25 /mh	73	/cy			/cy			73	106
	DI Pipe RJ - Class 350 glass lined 8"	2511.401	56.00 lf	39.25 /mh	440	134.00 /lf	7,879		/lf			8,319	8,517
	DI RJ CL 350 Glass lined 45 8"	2511.414	5.00 ea	39.25 /mh	393	924.00 /ea	4,620		/ea			5,013	5,189
	DI RJ Compact Cap 8	2511.510	2.00 ea	39.25 /mh	157	704.00 /ea	1,408		/ea			1,565	1,636
	DI RJ Compact Solid Sleeve Long 8	2511.522	2.00 ea	39.25 /mh	157	627.00 /ea	1,254		/ea			1,411	1,482
	Polybag 12" and Smaller	2333.090	56.00 lf	39.25 /mh	22	2.50 /lf	154		/lf			176	186
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Cross Existing	2333.010	4.00 ea	39.25 /mh	628	500.00 /ea	2,000		/ea			2,628	2,911
	Support Existing	2333.010	4.00 ea	39.25 /mh	628	50.00 /ea	200		/ea			828	1,111
	Warning Tape Detectable	2333.080	90.00 lf	39.25 /mh	35	0.12 /lf	11		/lf			46	62
	Tracer Wire	2333.080	90.00 lf	39.25 /mh	35	1.52 /lf	150		/lf			186	202
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for DIP 8"	2511.610	16.00 ea	39.25 /mh		115.00 /ea	1,840		/ea			1,840	1,840
	DI Joint Restraint - 8"	2511.050	4.00 ea	39.25 /mh	314	138.00 /ea	552		/ea			866	1,007
	Trenton wax tape, 6" x 9' Roll	2333.100	3.00 ea	39.25 /mh	707	57.00 /ea	171		/ea			878	1,195
	Poly Wrap for restraints	7260.100	9.00 LF	39.25 /mh	1	4.90 /LF	47		/LF			48	48
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	4.00 cy	/cy		180.00 /cy	756		/cy			756	756
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	8" PS from clar 3# to west pump station 00C21 CL 350 glass lined		56.00 lf		6,608		22,250			8,913	2,075	39,845	42,819
	02643- 6" PSC west pump station to existing 00C21 CL 350 Glass lined												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 6- 8'	2333.010	51.00 lf	39.25 /mh	500	/lf			/lf			500	726
	Trench Excavtion 10-12'	2333.010	10.00 lf	39.25 /mh	118	/lf			/lf			118	171
	Trench Backfill 6- 8'	2333.020	51.00 lf	39.25 /mh	601	/lf			/lf			601	871
	Trench Backfill 10-12'	2333.020	10.00 lf	39.25 /mh	157	/lf			/lf			157	228
	Trench Box 12' Deep	2333.030	10.00 lf	/lf		/lf			/lf				
	Utility Bedding Peastone	2305.200	20.11 bcy	/cy		30.00 /ton	965		/cy			965	965
	Spoils to Waste	2333.060	20.33 cy	39.25 /mh	80	/cy			/cy			80	116
	DI Pipe RJ - Class 350 Glass lined 6"	2511.401	61.00 lf	39.25 /mh	479	108.00 /lf	6,917		/lf			7,396	7,612
	DI RJ CL 350 Glass lined 45 6"	2511.414	5.00 ea	39.25 /mh	393	669.00 /ea	3,345		/ea			3,738	3,914
	DI RJ Compact Cap 6	2511.510	2.00 ea	39.25 /mh	157	490.00 /ea	980		/ea			1,137	1,208
	DI RJ Compact Solid Sleeve Long 6	2511.522	2.00 ea	39.25 /mh	157	220.00 /ea	440		/ea			597	668
	Polybag 12" and Smaller	2333.090	61.00 lf	39.25 /mh	24	2.50 /lf	168		/lf			192	202
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Cross Existing	2333.010	4.00 ea	39.25 /mh	628	500.00 /ea	2,000		/ea			2,628	2,911
	Tie to Existing esisting size unknown?	2333.010	1.00 ea	39.25 /mh	628	500.00 /ea	500		/ea			1,128	1,411
	Support Existing	2333.010	4.00 ea	39.25 /mh	628	50.00 /ea	200		/ea			828	1,111
	Warning Tape Detectable	2333.080	80.00 lf	39.25 /mh	31	0.12 /lf	10		/lf			41	55
	Tracer Wire	2333.080	80.00 lf	39.25 /mh	31	1.52 /lf	134		/lf			165	179
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI Joint Restraint - 6"	2511.050	4.00 ea	39.25 /mh	314	102.00 /ea	408		/ea			722	863
	DI MEGALUG for DIP 6"	2511.610	16.00 ea	39.25 /mh		106.00 /ea	1,696		/ea			1,696	1,696
	Trenton wax tape, 6" x 9' Roll	2333.100	3.00 ea	39.25 /mh	942	57.00 /ea	171		/ea			1,113	1,537
	Poly Wrap for restraints	7260.100	7.00 LF	39.25 /mh	1	4.90 /LF	37		/LF			37	38
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	5.00 cy	/cy		180.00 /cy	945		/cy			945	945
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	DI MJ Reducer 8" x 6" glass lined	15221.660	1.00 ea	39.25 /mh	118	1,800.00 /ea	1,800		/ea			1,918	1,971
	6" PSC west pump station to existing 00C21 CL 350 Glass lined		71.00 lf		6,928		21,044			6,313	2,075	36,360	39,477
	02643- 18" PE from EQ pump to EQ basin00C22 00C23 CL350 CM lined												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02643- 18" PE from EQ pump to EQ basin00C22 00C23 CL350 CM lined												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	1,256	50.00 /ea	50		50.00 /ea	50		1,356	1,921
	Trench Excavtion 8-10'	2333.010	78.00 lf	39.25 /mh	1,225	/lf			/lf			1,225	1,776
	Trench Excavtion 0- 4'	2333.010	60.00 lf	39.25 /mh	589	/lf			/lf			589	854
	Trench Excavtion 10-12'	2333.010	360.00 lf	39.25 /mh	4,239	/lf			/lf			4,239	6,147
	Trench Excavtion 12-14'	2333.010	66.00 lf	39.25 /mh	907	/lf			/lf			907	1,315
	Trench Backfill 8-10'	2333.020	78.00 lf	39.25 /mh	1,225	/lf			/lf			1,225	1,776
	Trench Backfill 10-12'	2333.020	360.00 lf	39.25 /mh	7,065	/lf			/lf			7,065	10,244
	Trench Backfill 0- 4'	2333.020	60.00 lf	39.25 /mh	589	/lf			/lf			589	854
	Trench Backfill 12-14'	2333.020	66.00 lf	39.25 /mh	1,295	/lf			/lf			1,295	1,878
	Trench Box 10' Deep	2333.030	78.00 lf	/lf		/lf			45.00 /lf	3,510		3,510	3,510
	Trench Box 12' Deep	2333.030	360.00 lf	/lf		/lf			45.00 /lf	16,200		16,200	16,200
	Trench Box 14' Deep	2333.030	66.00 lf	/lf		/lf			45.00 /lf	2,970		2,970	2,970
	Utility Bedding Peastone	2305.200	256.00 bcy	/cy		30.00 /ton	12,288		/cy			12,288	12,288
	Spoils to Waste	2333.060	256.00 cy	39.25 /mh	1,005	/cy			/cy			1,005	1,457
	DI Pipe RJ - Class 350 CM 18"	2511.401	504.00 lf	39.25 /mh	4,946	170.00 /lf	89,964		/lf			94,910	97,135
	DI RJ CL 350 CM 90 18"	2511.414	3.00 ea	39.25 /mh	707	2,061.00 /ea	6,183		/ea			6,890	7,207
	DI Pipe RJ - Class 350 CM 18"	2511.401	60.00 lf	39.25 /mh	9,420	170.00 /lf	10,710		/lf			20,130	24,369
	DI RJ CL 350 CM 45 18"	2511.414	16.00 ea	39.25 /mh	3,768	1,708.00 /ea	27,328		/ea			31,096	32,792
	DI RJ CL 350 22-½ 18"	2511.414	2.00 ea	39.25 /mh	471	1,456.00 /ea	2,912		/ea			3,383	3,595
	DI RJ CL 350 Tee 18"	2511.424	1.00 ea	39.25 /mh	314	3,452.00 /ea	3,452		/ea			3,766	3,907
	DI RJ Compact Cap 18	2511.510	3.00 ea	39.25 /mh	707	803.00 /ea	2,409		/ea			3,116	3,433
	DI RJ Compact Solid Sleeve Long 18	2511.522	3.00 ea	39.25 /mh	707	1,401.00 /ea	4,203		/ea			4,910	5,227
	Polybag 18" and smaller	2333.090	504.00 lf	39.25 /mh	198	4.00 /lf	2,218		/lf			2,415	2,504
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.70 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	15,640	5,950	21,590	21,590
	John Deere 624 Loader (172 HP) (M)	1900.132	1.70 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	12,240	5,100	17,340	17,340
	Water Truck, 4,000 Gallon (L)	1900.210	1.70 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	8,500	2,040	10,540	10,540
	Polybag 12" and Smaller	2333.090	60.00 lf	39.25 /mh	24	2.50 /lf	165		/lf			189	199
	Mikasa Jumping Jack Compactor (L)	1900.138	1.70 Mnth	/Mnth		/Mnth			400.00 /Mnth	680	170	850	850
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.70 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	5,525	850	6,375	6,375
	Pot Hole Existing	2333.010	15.00 ea	39.25 /mh	4,710	/ea			/ea			4,710	6,830
	Cross Existing	2333.010	15.00 ea	39.25 /mh	2,355	500.00 /ea	7,500		/ea			9,855	10,915
	Support Existing	2333.010	15.00 ea	39.25 /mh	2,355	50.00 /ea	750		/ea			3,105	4,165
	Warning Tape Detectable	2333.080	590.00 lf	39.25 /mh	232	0.12 /lf	71		/lf			302	407
	Tracer Wire	2333.080	590.00 lf	39.25 /mh	232	1.52 /lf	986		/lf			1,218	1,322
	Tracer Wire Test Box	2333.080	6.00 ea	39.25 /mh	942	95.00 /ea	570		/ea			1,512	1,936
	DI MEGALUG for DIP 18"	2511.610	54.00 ea	39.25 /mh		417.00 /ea	22,518		/ea			22,518	22,518
	DI Restraint for DIP 18"	2511.050	28.00 ea	39.25 /mh	3,297	665.00 /ea	18,620		/ea			21,917	23,401
	DI Wall Pipe FLG x MJ with ring 16in x 2ft 0in long	15221.308	2.00 ea	39.25 /mh	1,256	2,533.00 /ea	5,066		/ea			6,322	6,887
	Trenton outer-wrap, 6" x 50' Roll	2333.100	5.00 ea	39.25 /mh	2,355	285.00 /ea	1,425		/ea			3,780	4,840
	Poly Wrap for restraints	7260.100	131.00 LF	39.25 /mh	10	4.90 /LF	687		/LF			697	702
	Poly Tape	2333.090	4.00 roll	/roll		8.00 /roll	35		/roll			35	35
	Flow Fill at pipe crossings	3310.100	21.00 cy	/cy		180.00 /cy	3,969		/cy			3,969	3,969
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	10.00 ea	39.25 /mh		80.00 /ea	800		/ea			800	800
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.70 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	6,460	3,400	9,860	9,860
	18" PE from EQ pump to EQ basin00C22 00C23 CL350 CM lined		564.00 lf		58,396		224,879			71,775	17,510	372,560	398,838
	02643- 8" PSC from clarifier #4 to WPSPS 00C21 & 00C22 CL 350 Glass Lined												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 16-18'	2333.010	40.00 lf	39.25 /mh	408	/lf			/lf			408	592
	Trench Backfill 16-18'	2333.020	40.00 lf	39.25 /mh	550	/lf			/lf			550	797
	Trench Box 18' Deep	2333.030	40.00 lf	/lf		/lf			/lf				
	Utility Bedding Peastone	2305.200	5.67 bcy	/cy		30.00 /ton	272		/cy			272	272
	Spoils to Waste	2333.060	5.93 cy	39.25 /mh	23	/cy			/cy			23	34
	DI Pipe RJ - Class 350 8	2511.401	40.00 lf	39.25 /mh	314	111.00 /lf	4,662		/lf			4,976	5,117
	DI RJ Std Wgt 90 8	2511.414	1.00 ea	39.25 /mh	79	342.00 /ea	342		/ea			421	456
	DI RJ Std Wgt 45 8	2511.414	2.00 ea	39.25 /mh	157	278.00 /ea	556		/ea			713	784
	DI RJ Compact Cap 8	2511.510	2.00 ea	39.25 /mh	157	704.00 /ea	1,408		/ea			1,565	1,636
	DI RJ Compact Solid Sleeve Long 8	2511.522	2.00 ea	39.25 /mh	157	627.00 /ea	1,254		/ea			1,411	1,482
	Polybag 12" and Smaller	2333.090	40.00 lf	39.25 /mh	16	2.50 /lf	110		/lf			126	133
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	700	2,540	2,540
	John Deere 624 Loader (172 HP) (M)	1900.132	0.20 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,440	600	2,040	2,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.20 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,000	240	1,240	1,240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			400.00 /Mnth	80	20	100	100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	650	100	750	750
	Warning Tape Detectable	2333.080	80.00 lf	39.25 /mh	31	0.12 /lf	10		/lf			41	55
	Tracer Wire	2333.080	80.00 lf	39.25 /mh	31	1.52 /lf	134		/lf			165	179
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for DIP 8"	2511.610	13.00 ea	39.25 /mh		115.00 /ea	1,495		/ea			1,495	1,495

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02643- 8" PSC from clarifier #4 to WPSPS 00C21 & 00C22 CL 350 Glass Liined												
	DI Joint Restraint - 8"	2511.050	3.00 ea	39.25 /mh	236	138.00 /ea	414		/ea			650	755
	DI Wall Pipe FLG x MJ w/ Collar & Tapped Holes 6in x 1ft 0in long	15221.376	1.00 ea	39.25 /mh	314	834.00 /ea	834		/ea			1,148	1,289
	Trenton wax tape, 6" x 9' Roll	2333.100	4.00 ea	39.25 /mh	628	57.00 /ea	228		/ea			856	1,139
	Poly Wrap for restraints	7260.100	7.00 LF	39.25 /mh	1	4.90 /LF	37		/LF			37	38
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	2.00 cy	/cy		180.00 /cy	378		/cy			378	378
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	2.00 ea	39.25 /mh		80.00 /ea	160		/ea			160	160
	8" PSC from clarifier #4 to WPSPS 00C21 & 00C22 CL 350 Glass Liined		40.00 lf		4,043		12,542			5,060	1,660	23,305	25,124
	02643- 4" DP from clarifier #4 to WPSPS 00C22 CL 350 CM lined												
	Trench Excavtion 16-18'	2333.010	20.00 lf	39.25 /mh	204	/lf			/lf			204	296
	Trench Backfill 16-18'	2333.020	20.00 lf	39.25 /mh	275	/lf			/lf			275	398
	Utility Bedding Peastone	2305.200	7.00 bcy	/cy		30.00 /ton	336		/cy			336	336
	Spoils to Waste	2333.060	7.00 cy	39.25 /mh	27	/cy			/cy			27	40
	DI Pipe RJ - Class 350 GL 4	2511.401	20.00 lf	39.25 /mh	157	107.00 /lf	2,247		/lf			2,404	2,475
	DI RJ Class 350 GL45 4	2511.414	1.00 ea	39.25 /mh	79	118.00 /ea	118		/ea			197	232
	DI RJ Compact Cap 4	2511.510	2.00 ea	39.25 /mh	157	66.00 /ea	132		/ea			289	360
	DI RJ Compact Solid Sleeve Long 4	2511.522	2.00 ea	39.25 /mh	157	126.00 /ea	252		/ea			409	480
	Polybag 12" and Smaller	2333.090	20.00 lf	39.25 /mh	8	2.50 /lf	55		/lf			63	66
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	83	32	114	114
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	65	27	92	92
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	25	6	31	31
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			400.00 /Mnth	2	1	3	3
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	16	3	19	19
	Warning Tape Detectable	2333.080	60.00 lf	39.25 /mh	24	0.12 /lf	7		/lf			31	41
	Tracer Wire	2333.080	60.00 lf	39.25 /mh	24	1.52 /lf	100		/lf			124	134
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for DIP 4"	2511.610	9.00 ea	39.25 /mh		45.00 /ea	405		/ea			405	405
	DI Wall Pipe FLG x MJ w/ Collar & Tapped Holes 4in x 1ft 0in long	15221.376	1.00 ea	39.25 /mh	314	528.00 /ea	528		/ea			842	983
	DI Flanged 90 Ell Long 4"	15221.430	1.00 ea	39.25 /mh	79	189.00 /ea	189		/ea			268	303
	NBG Kit 125# SS 4in	15125.012	1.00 ea	39.25 /mh	39	47.00 /ea	47		/ea			86	104
	DI Wall Pipe FLG x PE w/ Collar 3in x 2ft 0in long	15221.336	1.00 ea	39.25 /mh	314	434.00 /ea	434		/ea			748	889
	Trenton wax tape, 6" x 9' Roll	2333.100	2.00 ea	39.25 /mh	314	57.00 /ea	114		/ea			428	569
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	4" DP from clarifier #4 to WPSPS 00C22 CL 350 CM lined		20.00 lf		2,485		5,235			191	68	7,977	9,095
	02643- cap existing after performance test 36" 00C21 note 8												
	DI RJ Std Wgt Cap 36	2511.410	1.00 ea	39.25 /mh	628	5,544.00 /ea	5,544		/ea			6,172	6,455
	DI MEGALUG for DIP 36"	2511.610	1.00 ea	39.25 /mh		1,968.00 /ea	1,968		/ea			1,968	1,968
	Piping Sub for performance testing Exc and Backfill	15403.100	1.00 ls	39.25 /mh	3,140	/ls		25,000	/mh			28,140	29,553
	Trenton wax tape, 6" x 9' Roll	2333.100	3.00 ea	39.25 /mh	942	57.00 /ea	171		/ea			1,113	1,537
	Line Stop 36" PC2 Effluent per curt	2240.050	1.00 ls	/ls		/ls		38,000	/ls			38,000	38,000
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	cap existing after performance test 36" 00C21 note 8				4,710		7,763	63,000				75,473	77,593
	02643- Replace Water line per Curt between clarifiers 00C21 & 00C22 CL 350												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 6- 8'	2333.010	400.00 lf	39.25 /mh	1,884	/lf			/lf			1,884	2,732
	Trench Backfill 6- 8'	2333.020	400.00 lf	39.25 /mh	2,512	/lf			/lf			2,512	3,642
	Utility Bedding Peastone	2305.200	130.75 bcy	/cy		30.00 /ton	6,276		/cy			6,276	6,276
	Spoils to Waste	2333.060	133.33 cy	39.25 /mh	523	/cy			/cy			523	759
	DI Pipe RJ - Class 350 8	2511.401	400.00 lf	39.25 /mh	1,727	111.00 /lf	46,620		/lf			48,347	49,124
	DI RJ CL 350 90 8	2511.414	2.00 ea	39.25 /mh	157	342.00 /ea	684		/ea			841	912
	DI RJ CL 350 Tee 8	2511.424	1.00 ea	39.25 /mh	79	507.00 /ea	507		/ea			586	621
	DI RJ Compact Cap 8	2511.510	2.00 ea	39.25 /mh	157	704.00 /ea	1,408		/ea			1,565	1,636
	DI RJ Compact Solid Sleeve Long 8	2511.522	2.00 ea	39.25 /mh	157	627.00 /ea	1,254		/ea			1,411	1,482
	Polybag 12" and Smaller	2333.090	400.00 lf	39.25 /mh	157	2.50 /lf	1,100		/lf			1,257	1,328
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	4,600	1,750	6,350	6,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	2,500	600	3,100	3,100
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			400.00 /Mnth	200	50	250	250
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	1,625	250	1,875	1,875
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Support Existing	2333.010	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Warning Tape Detectable	2333.080	420.00 lf	39.25 /mh	165	0.12 /lf	50		/lf			215	289
	Tracer Wire	2333.080	420.00 lf	39.25 /mh	165	1.52 /lf	702		/lf			867	941
	Tracer Wire Test Box	2333.080	4.00 ea	39.25 /mh	628	95.00 /ea	380		/ea			1,008	1,291
	DI MJ Compact Cap 8 with tap 2"	2511.310	2.00 ea	39.25 /mh	157	211.00 /ea	422		/ea			579	650
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	39.25 /mh	314	263.00 /ea	526		/ea			840	981
	Valve Box 2' Extension	2519.130	2.00 ea	39.25 /mh	39	94.00 /ea	188		/ea			227	245

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02643- Replace Water line per Curt between clarifiers 00C21 & 00C22 CL 350												
	Conc Block for Valve	2519.100	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Conc Pad for Valve Box	2519.100	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Valve Stem Extension	2519.100	2.00 ea	39.25 /mh	79	263.00 /ea	526		/ea			605	640
	Valve Position Indicator	2519.100	2.00 ea	39.25 /mh	79	1,325.00 /ea	2,650		/ea			2,729	2,764
	Valve - Marker Post	2519.100	2.00 ea	39.25 /mh	39	66.00 /ea	132		/ea			171	189
	Valve - Tee Wrench	2519.100	2.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	DI MEGALUG for DIP 8"	2511.610	16.00 ea	39.25 /mh		115.00 /ea	1,840		/ea			1,840	1,840
	DI Joint Restraint - 8"	2511.050	23.00 ea	39.25 /mh	1,806	138.00 /ea	3,174		/ea			4,980	5,792
	Hydrant 2"	2510.200	2.00 ea	39.25 /mh	942	1,751.00 /ea	3,502		/ea			4,444	4,868
	Trenton wax tape, 6" x 9' Roll	2333.100	4.00 ea	39.25 /mh	628	57.00 /ea	228		/ea			856	1,139
	Poly Wrap for restraints	7260.100	49.00 LF	39.25 /mh	4	4.90 /LF	257		/LF			261	262
	Poly Tape	2333.090	2.00 roll	/roll		8.00 /roll	18		/roll			18	18
	HDPE Coiled Pipe 2	2631.201	40.00 lf	39.25 /mh	330	3.26 /lf	137		/lf			467	615
	HDPE 90 elbow 2	2631.201	2.00 ea	39.25 /mh	16	172.00 /ea	361		/ea			378	385
	HDPE Male adapler	2631.220	4.00 ea	39.25 /mh	157	49.00 /ea	196		/ea			353	424
	HDPE Valve	2631.220	2.00 ea	39.25 /mh	157	413.00 /ea	826		/ea			983	1,054
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	2.00 ea	39.25 /mh		80.00 /ea	160		/ea			160	160
	Replace Water line per Curt between clarifiers 00C21 & 00C22 CL 350		400.00 lf		14,941		74,574			12,575	4,150	106,240	112,963
	PIPE Pipe				122,358		640,165	63,000		134,438	33,763	993,724	1,048,785
	SITE Sitework												
	02643- 8" PS from clarifier #4 to WPSPS 00C22 CL 350 Glass lined												
	Trench Excavtion 16-18'	2333.010	59.00 lf	39.25 /mh	602	/lf			/lf			602	873
	Trench Backfill 16-18'	2333.020	59.00 lf	39.25 /mh	811	/lf			/lf			811	1,175
	Utility Bedding Peastone	2305.200	1.13 bcy	/cy		30.00 /ton	54		/cy			54	54
	Utility Bedding Peastone	2305.200	16.67 bcy	/cy		30.00 /ton	800		/cy			800	800
	Spoils to Waste	2333.060	18.19 cy	39.25 /mh	71	/cy			/cy			71	104
	DI Pipe RJ - Class 350 8"	2511.401	59.00 lf	39.25 /mh	463	111.00 /lf	6,876		/lf			7,340	7,548
	DI RJ CL 350 GL 90 8"	2511.414	1.00 ea	39.25 /mh	79	927.00 /ea	927		/ea			1,006	1,041
	Polybag 12" and Smaller	2333.090	59.00 lf	39.25 /mh	23	2.50 /lf	162		/lf			185	196
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	700	2,540	2,540
	DI RJ Compact Solid Sleeve Long 8	2511.522	2.00 ea	39.25 /mh	157	627.00 /ea	1,254		/ea			1,411	1,482
	John Deere 624 Loader (172 HP) (M)	1900.132	0.20 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,440	600	2,040	2,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.20 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,000	240	1,240	1,240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			400.00 /Mnth	80	20	100	100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	650	100	750	750
	Warning Tape Detectable	2333.080	100.00 lf	39.25 /mh	39	0.12 /lf	12		/lf			51	69
	Tracer Wire	2333.080	100.00 lf	39.25 /mh	39	1.52 /lf	167		/lf			206	224
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for DIP 8"	2511.610	9.00 ea	39.25 /mh		115.00 /ea	1,035		/ea			1,035	1,035
	DI Joint Restraint - 8"	2511.050	4.00 ea	39.25 /mh	314	138.00 /ea	552		/ea			866	1,007
	DI MJ Compact Cap 8	2511.310	2.00 ea	39.25 /mh	157	640.00 /ea	1,280		/ea			1,437	1,508
	Trenton wax tape, 6" x 9' Roll	2333.100	2.00 ea	39.25 /mh	314	57.00 /ea	114		/ea			428	569
	Poly Wrap for restraints	7260.100	9.00 LF	39.25 /mh	1	4.90 /LF	47		/LF			48	48
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	1.00 cy	/cy		180.00 /cy	189		/cy			189	189
	DI Wall Pipe MJ x PE w/ Collar & Tapped Holes 8n x 1ft 0in long	15221.388	1.00 ea	39.25 /mh	314	834.00 /ea	834		/ea			1,148	1,289
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	8" PS from clarifier #4 to WPSPS 00C22 CL 350 Glass lined		59.00 lf		3,698		14,583			5,010	1,660	24,951	26,616
	02643- cap existing 16" line for performance testing 00C21 note 8												
	DI RJ Compact Cap 16	2511.510	1.00 ea	39.25 /mh	942	444.00 /ea	444		/ea			1,386	1,810
	DI MEGALUG for DIP 16"	2511.610	1.00 ea	39.25 /mh		325.00 /ea	325		/ea			325	325
	Piping sub for performace testing Exc and backfill	15403.100	1.00 ls	39.25 /mh	3,140	/ls		25,000	/mh			28,140	29,553
	Trenton wax tape, 6" x 9' Roll	2333.100	1.00 ea	39.25 /mh	628	57.00 /ea	57		/ea			685	968
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	1.00 ea	39.25 /mh		80.00 /ea	80		/ea			80	80
	cap existing 16" line for performance testing 00C21 note 8				4,710		906	25,000				30,616	32,736
	SITE Sitework				8,408		15,489	25,000		5,010	1,660	55,567	59,351
	00 - SITE Site				130,766		655,654	88,000		139,448	35,423	1,049,291	1,108,136
	22 - EPS PS East Primary Sludge Pump Station												
	PIPE Pipe												
	150-01 1c 12042002 6" PS/PSC in EPSPS 22M01/22M202 CL 350 Glass lined												
	DI Pipe 6in. dia FxF - 0ft. 5in.	15221.010	1.00 ea	39.25 /mh	79	842.00 /ea	842		/ea			921	956
	DI Pipe 6in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	39.25 /mh	79	842.00 /ea	842		/ea			921	956
	DI Pipe 6in. dia FxF - 1ft. 2in.	15221.010	1.00 ea	39.25 /mh	79	886.00 /ea	886		/ea			965	1,000
	DI Pipe 6in. dia FxF - 3ft. 5in.	15221.010	1.00 ea	39.25 /mh	118	886.00 /ea	886		/ea			1,004	1,057
	DI Pipe 6in. dia FxF - 3ft. 6in.	15221.010	1.00 ea	39.25 /mh	118	1,061.00 /ea	1,061		/ea			1,179	1,232
	DI Pipe 6in. dia FxF - 4ft. 6in.	15221.010	1.00 ea	39.25 /mh	157	1,148.00 /ea	1,148		/ea			1,305	1,376
	DI Pipe 6in. dia FxF - 6ft. 10in.	15221.010	1.00 ea	39.25 /mh	196	1,366.00 /ea	1,366		/ea			1,562	1,651
	DI Pipe 6in. dia FxF - 9ft. 7in.w/ 2" tap	15221.010	1.00 ea	39.25 /mh	314	2,557.00 /ea	2,557		/ea			2,871	3,012
	DI Pipe 8in. dia FxF - 2ft. 9in.	15221.010	1.00 ea	39.25 /mh	79	1,280.00 /ea	1,280		/ea			1,359	1,394
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	39.25 /mh	79	842.00 /ea	842		/ea			921	956

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 6" PS/PSC in EPSPS 22M01/22M202 CL 350 Glass lined												
	DI Flanged 90 ell 6"	15221.430	6.00 ea	39.25 /mh	471	948.00 /ea	5,688		/ea			6,159	6,371
	DI Flanged RED 90 ell 8" x 6"	15221.430	1.00 ea	39.25 /mh	79	1,215.00 /ea	1,215		/ea			1,294	1,329
	DI Flanged 45 ell 6"	15221.425	1.00 ea	39.25 /mh	79	931.00 /ea	931		/ea			1,010	1,045
	DI Flanged Tee 6"	15221.455	2.00 ea	39.25 /mh	236	1,275.00 /ea	2,550		/ea			2,786	2,891
	NBG Kit 125# SS 6in	15125.012	25.00 ea	39.25 /mh	981	76.00 /ea	1,900		/ea			2,881	3,323
	NBG Kit 125# SS 8in	15125.012	3.00 ea	39.25 /mh	118	94.00 /ea	282		/ea			400	453
	Instrument - Flow - Magnetic Flow Meter - 6in FE.D23	17200.000	1.00 ea	39.25 /mh	157	0.00 /ea	0		/ea			157	228
	Restrained Dismantling Joint 6" SS Bolts	15112.085	1.00 ea	39.25 /mh	118	658.00 /ea	658		/ea			776	829
	Stainless Steel Nipple 2" X 3"	15212.010	3.00 ea	39.25 /mh	39	22.00 /ea	66		/ea			105	122
	Valve Ball Threaded SS 2in	15110.014	2.00 ea	39.25 /mh	111	715.00 /ea	1,430		/ea			1,541	1,591
	PVC Sch 80/VIT UNION 2" S	15211.219	1.00 ea	39.25 /mh	8	31.00 /ea	31		/ea			39	43
	PVC Sch-80 22 Bend 2 SOC	2336.120	6.00 ea	39.25 /mh	49	16.00 /ea	96		/ea			145	168
	PVC Sch 80 PIPE 2" PE	15211.203	20.00 lf	39.25 /mh	165	9.00 /lf	180		/lf			345	419
	PVC Sch 80 45 EL 2" SOCxSOC	15211.208	1.00 ea	39.25 /mh	8	16.00 /ea	16		/ea			24	28
	PS Pipe Strut Clamp SS 2in	15060.486	6.00 ea	39.25 /mh	71	12.00 /ea	72		/ea			143	174
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	39.25 /mh	118	21.00 /lf	210		/lf			328	381
	PS Epoxy Anchor 3/8 x 5in SS	15060.112	13.00 ea	39.25 /mh	26	5.00 /ea	65		/ea			91	102
	PS Epoxy for Anchors	15060.110	2.00 ea	39.25 /mh	4	5.00 /ea	10		/ea			14	16
	PS Clevis Hanger SS 8in	15060.096	8.00 ea	39.25 /mh	157	185.00 /ea	1,480		/ea			1,637	1,708
	NBG Kit 125# Insulating 8in	15125.016	1.00 ea	39.25 /mh	39	623.00 /ea	623		/ea			662	680
	PS Threaded Rod 3/4in SS	15060.502	96.00 lf	39.25 /mh	377	10.00 /lf	960		/lf			1,337	1,506
	PS Hex Nut SS 3/4	15060.354	24.00 ea	39.25 /mh	94	0.87 /ea	21		/ea			115	157
	PS Washer Flat 3/4 SS	15060.576	24.00 ea	39.25 /mh	471	0.87 /ea	21		/ea			492	704
	Expansion Anchor 3/4 x 6-1/4in SS 304	5001.073	8.00 ea	39.25 /mh	16	28.00 /ea	224		/ea			240	247
	Core Drilled Hole - 10 -12"	15122.100	1.00 ea	39.25 /mh	79	0.00 /ea	0	150	/ea			229	264
	Link Seal Size LS-410-S	15123.100	20.00 ea	39.25 /mh	118	25.00 /ea	500		/ea			618	671
	Grout penetration 12in	15124.300	1.00 ea	39.25 /mh	79	15.00 /ea	15		/ea			94	129
	Bypass Pumping	2240.150	1.00 ls	39.25 /mh	471	0.00 /ls	0	2,500	/ls			2,971	3,183
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	6" PS/PSC in EPSPS 22M01/22M202 CL 350 Glass lined				6,658		31,004	2,650		50		40,362	43,358
	PIPE Pipe				6,658		31,004	2,650		50		40,362	43,358
	22 - EPS PS East Primary Sludge Pump Station				6,658		31,004	2,650		50		40,362	43,358
	23 - WPS PS West Primary Sludge Pump Station												
	PIPE Pipe												
	150-01 1c 12042002 WPSPS PS/PSC CL 53 Glass lined 23M01												
	DI Pipe 6in. dia FxF - 0ft. 10in.	15221.010	2.00 ea	39.25 /mh	157	842.00 /ea	1,684		/ea			1,841	1,912
	DI Pipe 4in. dia FxF - 0ft. 11in.	15221.010	3.00 ea	39.25 /mh	236	757.00 /ea	2,271		/ea			2,507	2,612
	DI Pipe 6in. dia FxF - 2ft. 2in.	15221.010	2.00 ea	39.25 /mh	157	973.00 /ea	1,946		/ea			2,103	2,174
	DI Pipe 6in. dia FxF - 0ft. 6in.	15221.010	2.00 ea	39.25 /mh	157	842.00 /ea	1,684		/ea			1,841	1,912
	DI Pipe 6in. dia FxF - 2ft. 7in.	15221.010	1.00 ea	39.25 /mh	79	797.00 /ea	797		/ea			876	911
	DI Pipe 6in. dia FxF - 3ft. 5in.	15221.010	1.00 ea	39.25 /mh	118	886.00 /ea	886		/ea			1,004	1,057
	DI Pipe 6in. dia FxF - 4ft. 0in.	15221.010	3.00 ea	39.25 /mh	353	1,104.00 /ea	3,312		/ea			3,665	3,824
	DI Pipe 6in. dia FxF - 2ft. 3in.	15221.010	1.00 ea	39.25 /mh	79	973.00 /ea	973		/ea			1,052	1,087
	DI Pipe 6in. dia FxF - 4ft. 6in.	15221.010	1.00 ea	39.25 /mh	118	1,148.00 /ea	1,148		/ea			1,266	1,319
	DI Pipe 6in. dia FxF - 5ft. 7in.	15221.010	1.00 ea	39.25 /mh	196	1,279.00 /ea	1,279		/ea			1,475	1,564
	DI Pipe 6in. dia FxF - 5ft. 8in.	15221.010	1.00 ea	39.25 /mh	196	1,279.00 /ea	1,279		/ea			1,475	1,564
	DI Pipe 6in. dia FxPE - 0ft. 9in.	15221.030	3.00 ea	39.25 /mh	236	672.00 /ea	2,016		/ea			2,252	2,357
	DI Pipe 6in. dia FxPE - 0ft. 10in.	15221.030	1.00 ea	39.25 /mh	79	671.00 /ea	671		/ea			750	785
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	3.00 ea	39.25 /mh	236	671.00 /ea	2,013		/ea			2,249	2,354
	DI Pipe 8in. dia FxF - 2ft. 3in.	15221.010	1.00 ea	39.25 /mh	79	1,219.00 /ea	1,219		/ea			1,298	1,333
	DI Pipe 6in. dia FxPE - 3ft. 3in.	15221.030	1.00 ea	39.25 /mh	79	891.00 /ea	891		/ea			970	1,005
	DI Pipe 8in. dia FxF - 8ft. 2in.	15221.010	1.00 ea	39.25 /mh	314	2,033.00 /ea	2,033		/ea			2,347	2,488
	DI Pipe 6in. dia FxPE - 3ft. 10in.	15221.030	1.00 ea	39.25 /mh	157	934.00 /ea	934		/ea			1,091	1,162
	DI Pipe 8in. dia FxPE - 0ft. 9in.	15221.030	2.00 ea	39.25 /mh	157	625.00 /ea	1,250		/ea			1,407	1,478
	DI Pipe 6in. dia FxPE - 4ft. 11in.	15221.030	2.00 ea	39.25 /mh	314	1,022.00 /ea	2,044		/ea			2,358	2,499
	DI Pipe 8in. dia FxF - 5ft. 6in.	15221.010	1.00 ea	39.25 /mh	196	1,584.00 /ea	1,584		/ea			1,780	1,869
	DI Pipe 4in. dia FxPE - 0ft. 9in.	15221.030	3.00 ea	39.25 /mh	236	624.00 /ea	1,872		/ea			2,108	2,213
	DI Pipe 8in. dia FxPE - 0ft. 10in.	15221.030	1.00 ea	39.25 /mh	79	782.00 /ea	782		/ea			861	896
	DI Flanged 90 ell 6"	15221.430	11.00 ea	39.25 /mh	864	948.00 /ea	10,428		/ea			11,292	11,680
	DI Pipe 8in. dia FxPE - 4ft. 0in. with 2" tap	15221.030	1.00 ea	39.25 /mh	79	1,990.00 /ea	1,990		/ea			2,069	2,104
	DI Pipe 8in. dia FxPE - 15ft. 0in.	15221.030	2.00 ea	39.25 /mh	785	2,739.00 /ea	5,478		/ea			6,263	6,616
	DI Flanged 45 ell 6"	15221.425	4.00 ea	39.25 /mh	314	882.00 /ea	3,528		/ea			3,842	3,983
	DI Flanged Tee 6"	15221.455	11.00 ea	39.25 /mh	864	1,887.00 /ea	20,757		/ea			21,621	22,009
	DI Flanged 45 ell 8"	15221.425	2.00 ea	39.25 /mh	157	1,275.00 /ea	2,550		/ea			2,707	2,778
	DI Flanged Tee 8"	15221.455	3.00 ea	39.25 /mh	353	1,887.00 /ea	5,661		/ea			6,014	6,173
	DI Flanged Tee 8x4"	15221.455	3.00 ea	39.25 /mh	236	1,791.00 /ea	5,373		/ea			5,609	5,714
	DI Flanged Con Red 6x4"	15221.445	3.00 ea	39.25 /mh	236	776.00 /ea	2,328		/ea			2,564	2,669
	DI Flanged Con Red 8x6"	15221.445	3.00 ea	39.25 /mh	236	1,151.00 /ea	3,453		/ea			3,689	3,794
	DI Blind Flange 6" with 2" tap	15221.405	3.00 ea	39.25 /mh	236	686.00 /ea	2,058		/ea			2,294	2,399
	Restrained Dismantling Joint 6" SS Bolts	15112.085	8.00 ea	39.25 /mh	1,256	658.00 /ea	5,264		/ea			6,520	7,085
	Valve - Plug MJ 6" With hand wheels	2519.160	6.00 ea	39.25 /mh	942	2,068.00 /ea	12,408		/ea			13,350	13,774
	Valve Check Flange 125# 6in	15110.040	3.00 ea	39.25 /mh	471	2,013.00 /ea	6,039		/ea			6,510	6,722
	Annular ring with pressure instrument	11900.102	3.00 ea	39.25 /mh	471	1,250.00 /ea	3,750		/ea			4,221	4,433
	Instrument - Pressure - Transmitter	17400.000	3.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	342
	NBG Kit 125# SS 6in	15125.012	77.00 ea	39.25 /mh	3,022	76.00 /ea	5,852		/ea			8,874	10,234
	Stainless Steel Nipple 2" X 3"	15212.010	13.00 ea	39.25 /mh	168	22.00 /ea	286		/ea			454	530
	Valve Ball Threaded SS 2in	15110.014	2.00 ea	39.25 /mh	111	715.00 /ea	1,430		/ea			1,541	1,591

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 WSPSPS PS/PSC CL 53 Glass lined 23M01												
	Valve Air/Vac Combo 2in (1ea added from another pipe takeoff)	15110.007	3.00 ea	39.25 /mh	471	2,288.00 /ea	6,864		/ea			7,335	7,547
	Valve Plug 2in	15110.655	5.00 ea	39.25 /mh	196	296.00 /ea	1,480		/ea			1,676	1,765
	Camlock Adapter Alum Female x FPT 2"	15220.610	5.00 ea	39.25 /mh	196	150.00 /ea	750		/ea			946	1,035
	PS Flange Stand grout	15060.152	19.00 ea	39.25 /mh	2,983	10.00 /ea	190		/ea			3,173	4,515
	NBG Kit 125# SS 8in	15125.012	29.00 ea	39.25 /mh	1,138	94.00 /ea	2,726		/ea			3,864	4,376
	NBG Kit 125# SS 4in	15125.012	15.00 ea	39.25 /mh	589	47.00 /ea	705		/ea			1,294	1,559
	Restrained Dismantling Joint 4" SS Bolts	15112.085	3.00 ea	39.25 /mh	471	506.00 /ea	1,518		/ea			1,989	2,201
	Valve Plug Flange 125# 4in	15110.650	3.00 ea	39.25 /mh	471	1,430.00 /ea	4,290		/ea			4,761	4,973
	DI Blind Flange 8" with 2" tap	15221.405	2.00 ea	39.25 /mh	157	279.00 /ea	558		/ea			715	786
	Valve Plug Flange 125# 8in	15110.650	5.00 ea	39.25 /mh	785	2,838.00 /ea	14,190		/ea			14,975	15,328
	Restrained Dismantling Joint 8" SS Bolts	15112.085	3.00 ea	39.25 /mh	471	858.00 /ea	2,574		/ea			3,045	3,257
	PS Clevis Hanger SS 6in	15060.096	5.00 ea	39.25 /mh	393	120.00 /ea	600		/ea			993	1,169
	PS Threaded Rod 3/4in SS	15060.502	60.00 lf	39.25 /mh	236	10.00 /lf	600		/lf			836	941
	PS Hex Nut SS 3/4	15060.354	15.00 ea	39.25 /mh	59	0.87 /ea	13		/ea			72	98
	PS Washer Flat 3/4 SS	15060.576	10.00 ea	39.25 /mh	196	0.87 /ea	9		/ea			205	293
	PS Beam/C Clamp W/lk Nut 3/4	15060.082	6.00 ea	39.25 /mh	24	32.00 /ea	192		/ea			216	226
	Floor pipe support 6" Dip 8' 4" to centerline	15060.475	4.00 ea	39.25 /mh	942	0.01 /ea	0		/ea			942	1,366
	Floor pipe support 6" DIP 1"7 1/2" centerline	15060.475	15.00 ea	39.25 /mh	2,355	0.01 /ea	0		/ea			2,355	3,415
	NBG Kit 125# Insulating 6in	15125.016	2.00 ea	39.25 /mh	79	516.00 /ea	1,032		/ea			1,111	1,146
	NBG Kit 125# Insulating 8in	15125.016	2.00 ea	39.25 /mh	79	623.00 /ea	1,246		/ea			1,325	1,360
	Valve Ball SW SS 3/4in low point drains	15110.012	3.00 ea	39.25 /mh	142	45.00 /ea	135		/ea			277	342
	Stainless Steel Nipple 3/4" X 3"	15212.010	3.00 ea	39.25 /mh	29	10.00 /ea	30		/ea			59	73
	Hose Adapter SS 3/4" MIP x Female GH Swivel	15220.110	3.00 ea	39.25 /mh	25	10.00 /ea	30		/ea			55	66
	DI Flex with restraint rods 8" MP 310	2511.615	1.00 ea	39.25 /mh	157	316.00 /ea	316		/ea			473	544
	Bypass Pumping for start up	2240.150	1.00 ls	39.25 /mh	471	/ls		2,500	/ls			2,971	3,183
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	942	50.00 /ea	50		50.00 /ea	50		1,042	1,466
	WSPSPS PS/PSC CL 53 Glass lined 23M01				29,093		173,299	2,500		50		204,942	218,034
	150-01 1c 12042002 WSPSPS DP sump pump discharge line 23M204 detail F CL 53 CM												
	DI Pipe 4in. dia FxF - 0ft. 6in.	15221.010	2.00 ea	39.25 /mh	79	333.00 /ea	666		/ea			745	780
	DI Pipe 4in. dia FxF - 0ft. 7in.	15221.010	1.00 ea	39.25 /mh	39	333.00 /ea	333		/ea			372	390
	DI Pipe 4in. dia FxF - 1ft. 3in.	15221.010	2.00 ea	39.25 /mh	79	370.00 /ea	740		/ea			819	854
	DI Pipe 4in. dia FxF - 2ft. 2in.	15221.010	1.00 ea	39.25 /mh	39	405.00 /ea	405		/ea			444	462
	DI Pipe 3in. dia FxF - 4ft. 4in.	15221.010	2.00 ea	39.25 /mh	314	857.00 /ea	1,714		/ea			2,028	2,169
	DI Flanged 90 ell 4"	15221.430	2.00 ea	39.25 /mh	157	189.00 /ea	378		/ea			535	606
	PS Flange Stand grout	15060.152	3.00 ea	39.25 /mh	471	10.00 /ea	30		/ea			501	713
	Valve Plug Flange 250# 4in	15110.655	2.00 ea	39.25 /mh	236	2,585.00 /ea	5,170		/ea			5,406	5,511
	Valve Check Flange 125# 4in	15110.040	2.00 ea	39.25 /mh	39	1,106.00 /ea	2,212		/ea			2,251	2,269
	PS Special Support for 4in DIP Pipe - MP-250	15060.475	3.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	NBG Kit 125# SS 4in	15125.012	7.00 ea	39.25 /mh	275	47.00 /ea	329		/ea			604	727
	NBG Kit 125# Insulating 4in	15125.016	1.00 ea	39.25 /mh	39	446.00 /ea	446		/ea			485	503
	DI Wall Pipe FLG x MJ w/ Collar 4in x 1ft 6in long	15221.332	1.00 ea	39.25 /mh	314	345.00 /ea	345		/ea			659	800
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	WSPSPS DP sump pump discharge line 23M204 detail F CL 53 CM				2,865		12,818			50		15,733	17,023
	PIPE Pipe				31,958		186,117	2,500		100		220,675	235,056
	23 - WPS PS West Primary Sludge Pump Station				31,958		186,117	2,500		100		220,675	235,056
	24 - EQPS EQ Pump Station												
	PIPE Pipe												
	150-01 1c 12042002 EQ pump station Equipment room DIP CL 53 CM lining pump piping 24-M02												
	DI Pipe 10in. dia FxF - 2ft. 8in.	15221.010	4.00 ea	39.25 /mh	314	906.00 /ea	3,624		/ea			3,938	4,079
	FAB SS Pipe 12in. dia FxF - 2ft. 0in. see detail 24M03	15221.010	4.00 ea	39.25 /mh	314	6,541.00 /ea	26,164		/ea			26,478	26,619
	DI Pipe 12in. dia FxF - 3ft. 0in.	15221.010	4.00 ea	39.25 /mh	471	1,339.00 /ea	5,356		/ea			5,827	6,039
	DI Pipe 12in. dia FxF - 3ft. 10in.	15221.010	4.00 ea	39.25 /mh	471	1,510.00 /ea	6,040		/ea			6,511	6,723
	DI Pipe 12in. dia FxF - 10ft. 0in.	15221.010	4.00 ea	39.25 /mh	1,256	2,617.00 /ea	10,468		/ea			11,724	12,289
	DI Pipe 12in. dia FxF - 12ft. 10in. with taps 2"	15221.010	4.00 ea	39.25 /mh	1,570	3,347.00 /ea	13,388		/ea			14,958	15,665
	DI Pipe 12in. dia FxF - 0ft. 10in.	15221.010	3.00 ea	39.25 /mh	353	970.00 /ea	2,910		/ea			3,263	3,422
	DI Pipe 18in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	39.25 /mh	118	1,874.00 /ea	1,874		/ea			1,992	2,045
	DI Pipe 12in. dia FxF - 1ft. 2in.	15221.010	1.00 ea	39.25 /mh	118	1,063.00 /ea	1,063		/ea			1,181	1,234
	DI Pipe 12in. dia FxF - 1ft. 5in. with 2" tap	15221.010	1.00 ea	39.25 /mh	118	1,243.00 /ea	1,243		/ea			1,361	1,414
	DI Pipe 12in. dia FxF - 2ft. 0in. with 2" taps	15221.010	3.00 ea	39.25 /mh	353	1,334.00 /ea	4,002		/ea			4,355	4,514
	DI Pipe 18in. dia FxF - 2ft. 9in.	15221.010	1.00 ea	39.25 /mh	118	2,468.00 /ea	2,468		/ea			2,586	2,639
	DI Pipe 18in. dia FxF - 3ft. 1in.	15221.010	1.00 ea	39.25 /mh	196	2,468.00 /ea	2,468		/ea			2,664	2,753
	DI Pipe 18in. dia FxF - 3ft. 4in.	15221.010	1.00 ea	39.25 /mh	196	2,616.00 /ea	2,616		/ea			2,812	2,901
	DI Pipe 18in. dia FxF - 3ft. 7in.	15221.010	1.00 ea	39.25 /mh	196	2,616.00 /ea	2,616		/ea			2,812	2,901
	DI Pipe 18in. dia FxF - 4ft. 0in.	15221.010	1.00 ea	39.25 /mh	196	2,764.00 /ea	2,764		/ea			2,960	3,049
	DI Pipe 18in. dia FxF - 4ft. 6in.	15221.010	2.00 ea	39.25 /mh	393	4,013.00 /ea	8,026		/ea			8,419	8,595
	DI Pipe 18in. dia FxF - 6ft. 4in.	15221.010	1.00 ea	39.25 /mh	314	3,505.00 /ea	3,505		/ea			3,819	3,960
	DI Pipe 18in. dia FxF - 9ft. 10in. with 2" tap	15221.010	1.00 ea	39.25 /mh	471	4,832.00 /ea	4,832		/ea			5,303	5,515
	DI Pipe 18in. dia FxPE - 1ft. 2in.	15221.030	1.00 ea	39.25 /mh	157	1,874.00 /ea	1,874		/ea			2,031	2,102
	DI Flanged 90 ell 10"	15221.430	4.00 ea	39.25 /mh	314	754.00 /ea	3,016		/ea			3,330	3,471
	DI Flanged 90 ell 12"	15221.430	4.00 ea	39.25 /mh	314	980.00 /ea	3,920		/ea			4,234	4,375
	DI Flanged 90 ell 18"	15221.430	3.00 ea	39.25 /mh	707	2,092.00 /ea	6,276		/ea			6,983	7,300
	DI Flanged 45 ell 12"	15221.425	4.00 ea	39.25 /mh	471	1,500.00 /ea	6,000		/ea			6,471	6,683
	DI Flanged Tee 18"	15221.455	1.00 ea	39.25 /mh	275	2,998.00 /ea	2,998		/ea			3,273	3,396
	DI Flanged Tee 18x12"	15221.455	4.00 ea	39.25 /mh	785	2,836.00 /ea	11,344		/ea			12,129	12,482
	DI Flanged Con Red 12x10"	15221.445	8.00 ea	39.25 /mh	942	1,548.00 /ea	12,384		/ea			13,326	13,750
	Valve Plug Flange 125# 18in	15110.650	2.00 ea	39.25 /mh	628	14,338.00 /ea	28,676		/ea			29,304	29,587

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 EQ pump station Equipment room DIP CL 53 CM lining pump piping 24-M02												
	PS Pipe Stand grout	15060.404	28.00 ea	39.25 /mh	1,099	10.00 /ea	280		/ea			1,379	1,874
	DI Blind Flange 18"	15221.405	2.00 ea	39.25 /mh	314	1,110.00 /ea	2,220		/ea			2,534	2,675
	DI Flanged 90 18" with 2" tap	15221.430	2.00 ea	39.25 /mh	314	2,196.00 /ea	4,392		/ea			4,706	4,847
	Restrained Dismantling Joint 18" SS Bolts	15112.085	1.00 ea	39.25 /mh	314	2,651.00 /ea	2,651		/ea			2,965	3,106
	18" Plug valve with EMO	15110.040	1.00 ea	39.25 /mh	314	41,393.00 /ea	41,393		/ea			41,707	41,848
	Valve tilting disk Check Flange 125# 12in	15110.040	4.00 ea	39.25 /mh	942	28,138.00 /ea	112,552		/ea			113,494	113,918
	Valve Plug Flange 125# 12in with hand wheel	15110.650	4.00 ea	39.25 /mh	942	5,082.00 /ea	20,328		/ea			21,270	21,694
	DIP Flared End 12"	2633.352	4.00 ea	39.25 /mh	314	856.00 /ea	3,424		/ea			3,738	3,879
	Valve Air/Vac Combo 1in	15110.007	6.00 ea	39.25 /mh	942	1,672.00 /ea	10,032		/ea			10,974	11,398
	Stainless Steel Nipple 1" x 3"	15212.010	12.00 ea	39.25 /mh	118	15.00 /ea	180		/ea			298	351
	Valve Ball Threaded SS 1in	15110.014	6.00 ea	39.25 /mh	236	396.00 /ea	2,376		/ea			2,612	2,717
	PVC Sch-80 Pipe 1 Bell End	2336.110	200.00 lf	39.25 /mh	1,649	3.60 /lf	720		/lf			2,369	3,110
	PVC Sch-80 45 Bend 1 SOC	2336.120	8.00 ea	39.25 /mh	66	8.00 /ea	64		/ea			130	160
	PVC Sch 80/WIT UNION 1" S	15211.219	6.00 ea	39.25 /mh	49	10.00 /ea	60		/ea			109	132
	PVC Sch 80 90 EL 1" S	15211.207	36.00 ea	39.25 /mh	297	4.00 /ea	144		/ea			441	574
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	6.00 ea	39.25 /mh	49	8.00 /ea	48		/ea			97	120
	PS Pipe Strut Clamp SS 1in	15060.486	60.00 ea	39.25 /mh	707	6.00 /ea	360		/ea			1,067	1,384
	PS Strut SS 1-5/8 x 1-5/8	15060.476	80.00 lf	39.25 /mh	942	21.00 /lf	1,680		/lf			2,622	3,046
	PS Strut Post Base SS	15060.478	6.00 ea	39.25 /mh	71	58.00 /ea	348		/ea			419	450
	Epoxy Anchor 1/2 x 5-1/2in SS 304	5001.053	140.00 ea	39.25 /mh	275	5.00 /ea	700		/ea			975	1,098
	Epoxy for Anchors	11000.250	6.00 ea	/ea		5.00 /ea	30		/ea			30	30
	PS Washer Flat 1/2 SS	15060.576	100.00 ea	39.25 /mh	981	0.50 /ea	50		/ea			1,031	1,473
	PS Hex Nut SS 1/2	15060.354	100.00 ea	39.25 /mh	294	0.50 /ea	50		/ea			344	477
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls				
	Heat Trace	16000.001	1.00 ls	/ls		/ls			/ls				
	Stainless Steel Nipple 2" X 6"	15212.010	15.00 ea	39.25 /mh	194	30.00 /ea	450		/ea			644	732
	Valve Ball Threaded SS 2in	15110.014	5.00 ea	39.25 /mh	277	715.00 /ea	3,575		/ea			3,852	3,976
	Stainless Steel 90 Elbow 2"	15212.040	5.00 ea	39.25 /mh	39	30.00 /ea	150		/ea			189	207
	PS Special Support for 18in DI Pipe - base bend MP083 3'2" to center	15060.475	2.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	PS Special Support for 18in DI Pipe - 3'2" to center	15060.475	3.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	PS Special Support for 18in DI Pipe - 24M03 detail 2 double support 3' 2" and 5' 11"	15060.475	4.00 ea	39.25 /mh	785	0.01 /ea	0		/ea			785	1,138
	PS Special Support for 12in DI Pipe - MP132	15060.475	8.00 ea	39.25 /mh	1,570	0.01 /ea	0		/ea			1,570	2,277
	PS Special Support for 12in DI Pipe - MP034	15060.475	8.00 ea	39.25 /mh	1,570	0.01 /ea	0		/ea			1,570	2,277
	PS Special Support for 12in DI Pipe - 5'11" MP083	15060.475	3.00 ea	39.25 /mh	589	0.01 /ea	0		/ea			589	854
	Sleeve Plastic CS-16-	15121.600	4.00 ea	39.25 /mh	314	457.00 /ea	1,828		/ea			2,142	2,283
	Link Seal Size LS-475-S	15123.100	136.00 ea	39.25 /mh	801	25.00 /ea	3,400		/ea			4,201	4,561
	PS Special Support for 12in DI Pipe - wall support	15060.475	8.00 ea	39.25 /mh	1,256	0.01 /ea	0		/ea			1,256	1,821
	NBG Kit 125# SS 10in	15125.012	16.00 ea	39.25 /mh	628	183.00 /ea	2,928		/ea			3,556	3,839
	NBG Kit 125# SS 12in	15125.012	48.00 ea	39.25 /mh	1,884	183.00 /ea	8,784		/ea			10,668	11,516
	NBG Kit 125# SS 18in	15125.012	26.00 ea	39.25 /mh	3,062	418.00 /ea	10,868		/ea			13,930	15,307
	CPVC Sch 80 PIPE 1"	15211.403	120.00 lf	39.25 /mh	989	3.60 /lf	432		/lf			1,421	1,866
	CPVC Sch 80 MALE ADPT 1" SPG X MT	15211.417	4.00 ea	39.25 /mh	33	4.00 /ea	16		/ea			49	64
	CPVC Sch 80 EPDM UNION 1" S	15211.419	4.00 ea	39.25 /mh	33	10.00 /ea	40		/ea			73	88
	CPVC Sch 80 LS 90 EL 1" S	15211.475	1.00 ea	39.25 /mh	8	7.00 /ea	7		/ea			15	19
	PS Pipe Strut Clamp SS 1in	15060.486	30.00 ea	39.25 /mh	353	6.00 /ea	180		/ea			533	692
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	39.25 /mh	353	21.00 /lf	630		/lf			983	1,142
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	60.00 ea	39.25 /mh	118	5.00 /ea	300		/ea			418	471
	Epoxy for Anchors	11000.250	5.00 ea	/ea		5.00 /ea	25		/ea			25	25
	PS Hex Nut SS 1/2	15060.354	60.00 ea	39.25 /mh	177	0.50 /ea	30		/ea			207	286
	PS Washer Flat 1/2 SS	15060.576	60.00 ea	39.25 /mh	589	0.50 /ea	30		/ea			619	884
	Sleeve Plastic CS-3-	15121.600	4.00 ea	39.25 /mh	314	86.00 /ea	344		/ea			658	799
	Link Seal Size LS-300-S	15123.100	32.00 ea	39.25 /mh	188	8.00 /ea	256		/ea			444	529
	Sleeve Plastic CS-3-1/2-	15121.600	4.00 ea	39.25 /mh	314	98.00 /ea	392		/ea			706	847
	Sleeve Plastic CS-22-	15121.600	1.00 ea	39.25 /mh	79	690.00 /ea	690		/ea			769	804
	Link Seal Size LS-340-S	15123.100	76.00 ea	39.25 /mh	447	20.00 /ea	1,520		/ea			1,967	2,169
	NBG Kit 125# Insulating 18in	15125.016	1.00 ea	39.25 /mh	118	2,100.00 /ea	2,100		/ea			2,218	2,271
	Link Seal Size LS-315-S	15123.100	24.00 ea	39.25 /mh	141	13.00 /ea	312		/ea			453	517
	Instrument -FE-24.1016 / FSL-24.1016	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - VAL-20.1017	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - Flow - Magnetic Flow Meter - 18in Val 24.1017	17200.000	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Instrument -VAI 24.1018	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument -FE-24.1026 / FSI-24.1016	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument -VAL-24-1027	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument -FE-24-1036 / FSL-24.1036	17000.001	1.00 ea	39.25 /mh	39	1,200.00 /ea	1,200		/ea			1,239	1,257
	Instrument -Val 24.1037	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument -FE-24.1046 / FSL-24.1046	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument -VAL-241047	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	DI Flex with restrant rods 18"per MP-310	2511.615	1.00 ea	39.25 /mh	314	1,375.00 /ea	1,375		/ea			1,689	1,830
	Grout Sleeve 16in	15124.300	4.00 ea	39.25 /mh	628	20.00 /ea	80		/ea			708	991
	Grout Sleeve 3in	15124.300	4.00 ea	39.25 /mh	157	5.00 /ea	20		/ea			177	248
	Grout Sleeve 3-1/2in	15124.300	4.00 ea	39.25 /mh	157	5.00 /ea	20		/ea			177	248
	Grout Sleeve 22in	15124.300	1.00 ea	39.25 /mh	157	25.00 /ea	25		/ea			182	253
	Stainless Steel Nipple 1/2" X 2"	15212.010	20.00 ea	39.25 /mh	196	10.00 /ea	200		/ea			396	485
	Stainless Steel Tee 1/2"	15212.055	4.00 ea	39.25 /mh	31	8.00 /ea	32		/ea			63	78
	Stainless Steel 90 Elbow 1/2"	15212.040	4.00 ea	39.25 /mh	31	7.00 /ea	28		/ea			59	74
	Valve Ball Threaded SS 1/2in	15110.014	8.00 ea	39.25 /mh	314	19.00 /ea	152		/ea			466	607
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	942	50.00 /ea	50		50.00 /ea	50		1,042	1,466

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	EQ pump station Equipment room DIP CL 53 CM lining pump piping 24-M02				44,959		428,466			50		473,475	493,707
	150-01 1c 12042002 Eq pump station Sump discharge CL 53 CM lining												
	DI Pipe 3in. dia FxF - 1ft. 0in.	15221.010	3.00 ea	39.25 /mh	118	352.00 /ea	1,056		/ea			1,174	1,227
	DI Pipe 3in. dia FxF - 2ft. 0in.	15221.010	2.00 ea	39.25 /mh	157	497.00 /ea	994		/ea			1,151	1,222
	DI Pipe 3in. dia FxF - 6ft. 0in.	15221.010	3.00 ea	39.25 /mh	471	1,074.00 /ea	3,222		/ea			3,693	3,905
	DI Flanged 90 ell 4"	15221.430	2.00 ea	39.25 /mh	79	189.00 /ea	378		/ea			457	492
	DI Flanged Tee 3"	15221.455	1.00 ea	39.25 /mh	39	174.00 /ea	174		/ea			213	231
	PS Pipe Stand grout	15060.404	2.00 ea	39.25 /mh	79	10.00 /ea	20		/ea			99	134
	Valve Plug Flange 125# 3in	15110.650	2.00 ea	39.25 /mh	157	1,744.00 /ea	3,488		/ea			3,645	3,716
	Valve Check Flange 125# 3in	15110.040	2.00 ea	39.25 /mh	157	1,106.00 /ea	2,212		/ea			2,369	2,440
	PS Special Support for 3in DIP - Wall supports no detail	15060.475	3.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	PS Special Support for 3in DIP - Floor supports no detail 1' 6" to center	15060.475	2.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Sleeve Plastic CS-5-	15121.600	1.00 ea	39.25 /mh	79	150.00 /ea	150		/ea			229	264
	Link Seal Size LS-300-S	15123.100	16.00 ea	39.25 /mh	94	8.00 /ea	128		/ea			222	265
	NBG Kit 125# SS 3in	15125.012	16.00 ea	39.25 /mh	628	24.00 /ea	384		/ea			1,012	1,295
	Grout Sleeve 5in	15124.300	1.00 ea	39.25 /mh	39	5.00 /ea	5		/ea			44	62
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50	50.00 /ea		50		728	1,011
	Eq pump station Sump discharge CL 53 CM lining				3,509		12,261			50		15,820	17,399
	PIPE Pipe				48,468		440,728			100		489,295	511,106
	24 - EQPS EQ Pump Station				48,468		440,728			100		489,295	511,106
	25 - EQRVV EQ Return Valve Vault												
	PIPE Pipe												
	150-01 1c 12042002 Valve vault piping 16" PE 25M05 CL 53 CM lined												
	DI Pipe 16in. dia FxF - 1ft. 8in.	15221.010	2.00 ea	39.25 /mh	314	1,820.00 /ea	3,640		/ea			3,954	4,095
	DI Pipe 16in. dia FxF - 3ft. 2in.	15221.010	2.00 ea	39.25 /mh	314	2,231.00 /ea	4,462		/ea			4,776	4,917
	DI Pipe 16in. dia FxF - 5ft. 8in.	15221.010	2.00 ea	39.25 /mh	471	2,915.00 /ea	5,830		/ea			6,301	6,513
	DI Pipe 16in. dia FxPE - 1ft. 4in.	15221.030	2.00 ea	39.25 /mh	314	1,127.00 /ea	2,254		/ea			2,568	2,709
	DI Pipe 16in. dia FxPE - 6ft. 0in.	15221.030	4.00 ea	39.25 /mh	942	2,500.00 /ea	10,000		/ea			10,942	11,366
	PS Pipe Stand grout	15060.404	6.00 ea	39.25 /mh	236	10.00 /ea	60		/ea			296	401
	Valve Plug Flange 125# 16in with nut actutor	15110.650	4.00 ea	39.25 /mh	942	12,650.00 /ea	50,600		/ea			51,542	51,966
	V-port ball valve 16 in FCV-25.116 / FCV25-.1126	15110.650	2.00 ea	39.25 /mh	628	52,630.00 /ea	105,260		/ea			105,888	106,171
	Restrained Dismantling Joint 16" SS Bolts	15112.085	2.00 ea	39.25 /mh	628	2,121.00 /ea	4,242		/ea			4,870	5,153
	Instrument - Flow - Magnetic Flow Meter - 16in FE-251113 / FE-25-1123	17200.000	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	NBG Kit 125# SS 16in	15125.012	18.00 ea	39.25 /mh	1,766	304.00 /ea	5,472		/ea			7,238	8,033
	PS Special Support for 16in DIP - 1'9" floor to center	15060.475	6.00 ea	39.25 /mh	942	0.01 /ea	0		/ea			942	1,366
	Epoxy for SS304 Anchors	5001.053	24.00 ea	39.25 /mh	47	5.00 /ea	120		/ea			167	188
	Epoxy Anchor 7/8 x 8in SS 304	5001.053	24.00 ea	39.25 /mh	47	11.00 /ea	264		/ea			311	332
	PS Hex Nut SS 7/8	15060.354	24.00 ea	39.25 /mh	94	1.00 /ea	24		/ea			118	161
	PS Washer Flat 7/8 SS	15060.576	24.00 ea	39.25 /mh	471	1.00 /ea	24		/ea			495	707
	Valve Stem Extension 6'	2519.100	2.00 ea	39.25 /mh	79	263.00 /ea	526		/ea			605	640
	Sleeve Plastic CS-5- for valve extension	15121.600	2.00 ea	39.25 /mh	157	150.00 /ea	300		/ea			457	528
	Stainless Steel 90 Elbow 1/2"	15212.040	6.00 ea	39.25 /mh	47	6.00 /ea	36		/ea			83	104
	Stainless Steel Nipple 1/2" X 2"	15212.010	12.00 ea	39.25 /mh	118	10.00 /ea	120		/ea			238	291
	Stainless Steel Union 1/2"	15212.060	2.00 ea	39.25 /mh	16	15.00 /ea	30		/ea			46	53
	PS Pipe Strut Clamp SS 1/2in	15060.486	4.00 ea	39.25 /mh	47	3.00 /ea	12		/ea			59	80
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	39.25 /mh	118	21.00 /lf	210		/lf			328	381
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS Epoxy Anchor 3/8 x 5in SS	15060.112	16.00 ea	39.25 /mh	31	5.00 /ea	80		/ea			111	126
	PS Hex Nut SS 3/8	15060.354	16.00 ea	39.25 /mh	31	0.17 /ea	3		/ea			34	48
	PS Washer Lock 3/8 SS	15060.578	16.00 ea	39.25 /mh	157	1.00 /ea	16		/ea			173	244
	Stainless Steel Pipe 1"	15212.005	20.00 lf	39.25 /mh	157	15.00 /lf	300		/lf			457	528
	Stainless Steel 90 Elbow 1"	15212.040	4.00 ea	39.25 /mh	31	11.00 /ea	44		/ea			75	90
	Valve Ball Threaded SS 1in	15110.014	1.00 ea	39.25 /mh	39	396.00 /ea	396		/ea			435	453
	Stainless Steel Tee 1"	15212.055	1.00 ea	39.25 /mh	8	14.00 /ea	14		/ea			22	25
	Stainless Steel Bushing mpt x fpt 1in x 1/4in	15212.015	1.00 ea	39.25 /mh	8	8.00 /ea	8		/ea			16	19
	Valve Ball Threaded SS 1/2in	15110.014	1.00 ea	39.25 /mh	39	19.00 /ea	19		/ea			58	76
	Sleeve Plastic CS-22-	15121.600	4.00 ea	39.25 /mh	314	690.00 /ea	2,760		/ea			3,074	3,215
	Link Seal Size LS-360-S	15123.100	224.00 ea	39.25 /mh	1,319	25.00 /ea	5,600		/ea			6,919	7,512
	Link Seal Size LS-300-S	15123.100	8.00 ea	39.25 /mh	47	8.00 /ea	64		/ea			111	132
	Sleeve Plastic CS-3-	15121.600	1.00 ea	39.25 /mh	79	86.00 /ea	86		/ea			165	200
	Grout Sleeve 22in	15124.300	4.00 ea	39.25 /mh	628	25.00 /ea	100		/ea			728	1,011
	Grout Sleeve 3in	15124.300	1.00 ea	39.25 /mh	39	5.00 /ea	5		/ea			44	62
	Valve vault piping 16" PE 25M05 CL 53 CM lined				12,340		203,213					215,553	221,106
	PIPE Pipe				12,340		203,213					215,553	221,106
	25 - EQRVV EQ Return Valve Vault				12,340		203,213					215,553	221,106
	45 - RPUMP Reuse Pump Station												
	PIPE Pipe												
	150-01 1c 12042002 Reuse pump station pump piping BS ASTM A53 TYPE E GRADE A CM 45M01												
	Valve Butterfly Lugged 125# 12in High performance	15110.026	1.00 ea	39.25 /mh	118	4,796.00 /ea	4,796		/ea			4,914	4,967
	Valve tilting disk check valve 12 in	15110.040	4.00 ea	39.25 /mh	471	28,138.00 /ea	112,552		/ea			113,023	113,235
	Stainless Steel Nipple 4" X 6"	15212.010	12.00 ea	39.25 /mh	236	57.00 /ea	684		/ea			920	1,025
	Stainless Steel Companion Flange threaded 4"	15212.084	8.00 ea	39.25 /mh	314	193.00 /ea	1,544		/ea			1,858	1,999
	Valve Ball Threaded SS 4in	15110.014	4.00 ea	39.25 /mh	314	793.00 /ea	3,172		/ea			3,486	3,627
	NBG Kit 125# SS 12in	15125.012	12.00 ea	39.25 /mh	942	183.00 /ea	2,196		/ea			3,138	3,562
	NBG Kit 125# SS 8in	15125.012	4.00 ea	39.25 /mh	157	183.00 /ea	732		/ea			889	960

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 Reuse pump station pump piping BS ASTM A53 TYPE E GRADE A CM 45M01												
	VIC Coupling 12"	15221.680	4.00 ea	39.25 /mh	314	581.00 /ea	2,324		/ea			2,638	2,779
	Surge relief valve 6in	15110.040	1.00 ea	39.25 /mh	314	13,288.00 /ea	13,288		/ea			13,602	13,743
	Pressure reducing valve valve 12in	15110.042	1.00 ea	39.25 /mh	314	38,929.00 /ea	38,929		/ea			39,243	39,384
	NBG Kit 125# SS 6in	15125.012	2.00 ea	39.25 /mh	79	76.00 /ea	152		/ea			231	266
	NBG Kit 125# SS 12in	15125.012	2.00 ea	39.25 /mh	157	183.00 /ea	366		/ea			523	594
	Valve Air/Vac Combo 4in	15110.007	4.00 ea	39.25 /mh	628	3,210.00 /ea	12,840		/ea			13,468	13,751
	PVC Sch 80 PIPE 2" PE	15211.203	80.00 lf	39.25 /mh	659	9.00 /lf	720		/lf			1,379	1,676
	PVC Sch 80 90 EL 2" S	15211.207	16.00 ea	39.25 /mh	132	7.00 /ea	112		/ea			244	303
	PVC Sch 80 EPDM UNION 2" S	15211.219	4.00 ea	39.25 /mh	33	30.00 /ea	120		/ea			153	168
	CPVC Sch 80 MALE ADPT 2" SXMT	15211.417	4.00 ea	39.25 /mh	33	25.00 /mh	100		/ea			133	148
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS Pipe Strut Clamp SS 2in	15060.486	16.00 ea	39.25 /mh	188	12.00 /ea	192		/ea			380	465
	PS Strut Post Base SS	15060.478	8.00 ea	39.25 /mh	94	58.00 /ea	464		/ea			558	601
	PS Anchor Bolt 1/2x6 SS	15060.020	32.00 ea	39.25 /mh	63	8.00 /ea	256		/ea			319	347
	Fab Stainless Steel Pipe - 12" - F X V 2'8" with 4" tap	15233.505	4.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	PS Hex Nut SS 1/2	15060.354	32.00 ea	39.25 /mh	94	0.50 /ea	16		/ea			110	153
	Fab Stainless Steel Pipe - 12" - *F X V 2'9" with 1" tap	15233.505	4.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	PS Washer Flat 1/2 SS	15060.576	32.00 ea	39.25 /mh	314	0.50 /ea	16		/ea			330	471
	Fab Stainless Steel Pipe - 12" x8" concentric red	15233.505	4.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	DI VIC Coupling 12"	15221.680	4.00 ea	39.25 /mh	314	581.00 /ea	2,324		/ea			2,638	2,779
	Supply Stainless Steel Pipe Package	15233.505	1.00 ls	/ls		0.01 /ls	0		/ls			0	0
	Instrument -Sv-45.0017 on PRV	17000.001	1.00 ea	39.25 /mh	79	1,200.00 /ea	1,200		/ea			1,279	1,314
	Instrument - FE 45.1011 Thermal flow switch	17000.001	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Instrument -FE-45.1021 Thermal flow Switch	17000.001	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Instrument -FE 45.1001 Thermal flow switch	17000.001	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Instrument -FE-451041 Thermal flow switch	17000.001	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Stainless Steel Nipple 1/2" X 2"	15212.010	4.00 ea	39.25 /mh	39	10.00 /ea	40		/ea			79	97
	Valve Ball Threaded SS 1/2in	15110.014	4.00 ea	39.25 /mh	157	19.00 /ea	76		/ea			233	304
	PS Special Support for 12in Steel Pipe (not shown) with grout	15060.475	4.00 ea	39.25 /mh	942	0.01 /ea	0		/ea			942	1,366
	Reuse pump station pump piping BS ASTM A53 TYPE E GRADE A CM 45M01				9,618		199,631					209,249	213,577
	PIPE Pipe				9,618		199,631					209,249	213,577
	45 - RPUMP Reuse Pump Station				9,618		199,631					209,249	213,577
	400519.01 Ductile Iron Pipe				239,808		1,716,347	93,150		139,698	35,423	2,224,426	2,332,340
400523.01	Stainless Steel Pipe & Tubing												
00 - SITE	Site												
	PIPE Pipe												
	150-553 Fabricated Stainless steel piping supply												
	Supply Steel Pipe Package (include 14k air compressor pipe)	15233.405	1.00 ls	/ls		/ls		321,562	/ls			321,562	321,562
	Fabricated Stainless steel piping supply							321,562				321,562	321,562
	PIPE Pipe							321,562				321,562	321,562
	00 - SITE Site							321,562				321,562	321,562
20 - PC 4	Primary Clarifier 4												
	PIPE Pipe												
	150-01 1c 12042002 6" PSC from scum sch 10 SS 20M02 section B												
	DI Wall Pipe FLG x PE w/ Collar 6in x 1ft 0in long	15221.336	1.00 ea	39.25 /mh	314	521.00 /ea	521		/ea			835	976
	PS Special Support for 8in SS Pipe in clarifier for scum	15060.475	2.00 ea	39.25 /mh	314	1,500.00 /ea	3,000		/ea			3,314	3,455
	Fab Stainless Steel Pipe - 6" - 7'	15233.505	1.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	NBG Kit 125# Insulating 6in	15125.016	1.00 ea	39.25 /mh	39	516.00 /ea	516		/ea			555	573
	Fab Stainless Steel Pipe - 6" - 3'	15233.505	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Fernco Cplng w/ 2 ea SS Pipe Clamps 6"	15112.550	1.00 ea	39.25 /mh	39	75.00 /ea	75		/ea			114	132
	Fab Stainless Steel Pipe - 6" - 90 elbow	15233.505	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Supply Stainless Steel Pipe Package	15233.505	1.00 ls	/ls		0.01 /ls	0		/ls			0	0
	6" PSC from scum sch 10 SS 20M02 section B				981		4,112					5,093	5,535
	150-55 80 SS SCH 80 3000lb fitting NPHW to sprayers at clarifier #4 20M02												
	Stainless Steel Pipe 1/2"	15212.005	60.00 lf	39.25 /mh	824	7.00 /lf	420		/lf			1,244	1,615
	Stainless Steel 45 Elbow 1/2"	15212.035	12.00 ea	39.25 /mh	165	30.00 /ea	360		/ea			525	599
	Stainless Steel Tee 1/2"	15212.035	6.00 ea	39.25 /mh	82	56.00 /ea	336		/ea			418	436
	Stainless Steel Coupling 1/2"	15212.025	4.00 ea	39.25 /mh	55	12.00 /ea	48		/ea			103	128
	Stainless Steel Nipple 1/2" X 2"	15212.010	5.00 ea	39.25 /mh	69	10.00 /ea	50		/ea			119	150
	Stainless Steel Reducer 1in x 1/2in	15212.050	2.00 ea	39.25 /mh	27	28.00 /ea	56		/ea			83	96
	Valve Ball Threaded SS 1/2in	15110.010	2.00 ea	39.25 /mh	80	226.00 /ea	452		/ea			532	568
	PS Strut SS 1-5/8 x 1-5/8	15060.476	40.00 lf	39.25 /mh	471	21.00 /lf	840		/lf			1,311	1,523
	PS Strut Post Base SS	15060.478	2.00 ea	39.25 /mh	24	58.00 /ea	116		/ea			140	150
	PS 2 Piece Clamp SS 1/2 in	15060.518	24.00 ea	39.25 /mh	283	6.00 /ea	144		/ea			427	554
	PS Expansion Anchor 1/2 x 2-3/4in SS	15060.127	48.00 ea	39.25 /mh	94	4.00 /ea	192		/ea			286	329
	Stainless Steel sprayer nozzles	15212.010	15.00 ea	39.25 /mh	147	15.00 /ea	225		/ea			372	438
	Camlock Adapter Female x FPT 1/2 for hot water	15220.610	2.00 ea	39.25 /mh	39	50.00 /ea	100		/ea			139	157
	Hose Adapter SS 3/4" MIP x Female GH Swivel	15220.110	2.00 ea	39.25 /mh	27	14.00 /ea	28		/ea			55	68
	Sub -Insulation on piping	7210.200	1.00 LS	/LS		/L S			/LS				
	Heat Trace	16000.001	1.00 ls	/ls		/ls			/ls				
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls				

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-55 80 SS SCH 80 3000lb fitting NPHW to sprayers at clarifier #4 20M02												
	heat trace	16000.001	1.00 ls	/ls		/ls			/ls				
	SS SCH 80 3000lb fitting NPHW to sprayers at clarifier #4 20M02		60.00 lf		2,388		3,367					5,755	6,830
	PIPE Pipe				3,369		7,479					10,848	12,364
	20 - PC 4 Primary Clarifier 4				3,369		7,479					10,848	12,364
	23 - WPS PS West Primary Sludge Pump Station												
	PIPE Pipe												
	150-4 1 CA piping to and from compressor and storage tank 23-M01												
	Stainless Steel Pipe 3"	15212.005	20.00 lf	39.25 /mh	628	31.00 /lf	620		/lf			1,248	1,531
	Stainless Steel Pipe 4"	15212.005	60.00 lf	39.25 /mh	1,884	40.00 /lf	2,400		/lf			4,284	5,132
	Stainless Steel 90 Elbow 3"	15212.040	4.00 ea	39.25 /mh	157	120.00 /ea	480		/ea			637	708
	Stainless Steel 90 Elbow 4"	15212.040	6.00 ea	39.25 /mh	236	160.00 /ea	960		/ea			1,196	1,301
	Stainless Steel Tee 3"	15212.035	1.00 ea	39.25 /mh	39	120.00 /ea	120		/ea			159	177
	Stainless steel Tee 4"	15212.035	1.00 ea	39.25 /mh	39	160.00 /ea	160		/ea			199	217
	Stainless Steel Coupling 3"	15212.025	1.00 ea	39.25 /mh	39	80.00 /ea	80		/ea			119	137
	Stainless Steel Coupling 4"	15212.025	3.00 ea	39.25 /mh	118	120.00 /ea	360		/ea			478	531
	Stainless steel reducer 3x2	15231.035	1.00 ea	39.25 /mh	39	0.00 /ea	0		/ea			39	57
	stainless sreel reducer 4x3	15231.035	3.00 ea	39.25 /mh	118	0.00 /ea	0		/ea			118	171
	Stau=inless steel Union 3"	15231.085	4.00 ea	39.25 /mh	314	0.00 /ea	0		/ea			314	455
	PS Clevis Hanger Epoxy SS 3in	15060.099	2.00 ea	39.25 /mh	79	84.00 /ea	168		/ea			247	282
	PS Clevis Hanger Epoxy SS 4in	15060.099	7.00 ea	39.25 /mh	275	119.00 /ea	833		/ea			1,108	1,231
	PS Threaded Rod 1/2in SS	15060.502	10.00 lf	39.25 /mh	39	5.00 /lf	50		/lf			89	107
	PS Threaded Rod 5/8in SS	15060.502	35.00 lf	39.25 /mh	137	7.00 /lf	245		/lf			382	444
	PS Hex Nut SS 1/2	15060.354	6.00 ea	39.25 /mh	18	0.50 /ea	3		/ea			21	29
	PS Hex Nut SS 5/8	15060.354	21.00 ea	39.25 /mh	62	0.86 /ea	18		/ea			80	108
	PS Washer Flat 1/2 SS	15060.576	6.00 ea	39.25 /mh	59	0.50 /ea	3		/ea			62	88
	PS Washer Flat 5/8 SS	15060.576	21.00 ea	39.25 /mh	206	0.50 /ea	11		/ea			217	309
	PS Concrete Insert SS 1/2" Rod	15060.092	2.00 ea	39.25 /mh	69	46.00 /ea	92		/ea			161	192
	PS Concrete Insert SS 5/8" Rod	15060.092	7.00 ea	39.25 /mh	242	72.00 /ea	504		/ea			746	855
	Valve Ball Threaded SS 4in	15110.014	4.00 ea	39.25 /mh	236	793.00 /ea	3,172		/ea			3,408	3,513
	Stainless Steel Nipple 3/4" X 3"	15212.010	2.00 ea	39.25 /mh	20	10.00 /ea	20		/ea			40	48
	Valve Ball Threaded SS 3/4in	15110.014	1.00 ea	39.25 /mh	28	22.00 /ea	22		/ea			50	63
	Sleeve Plastic CS-5-	15121.600	2.00 ea	39.25 /mh	79	150.00 /ea	300		/ea			379	414
	Link Seal Size LS-200-S	15123.100	18.00 ea	39.25 /mh	106	5.00 /ea	90		/ea			196	244
	Stainless Steel Pipe 1-1/4"	15212.005	15.00 lf	39.25 /mh	118	22.00 /lf	330		/lf			448	501
	Stainless Steel 90 Elbow 1-1/4"	15212.040	4.00 ea	39.25 /mh	31	125.00 /ea	500		/ea			531	546
	Valve Ball Threaded SS 1-1/4in	15110.014	1.00 ea	39.25 /mh	40	550.00 /ea	550		/ea			590	609
	PS Pipe Strut Clamp SS 1-1/4in	15060.486	6.00 ea	39.25 /mh	71	10.00 /ea	60		/ea			131	162
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS Anchor Bolt 3/8x6 SS	15060.020	24.00 ea	39.25 /mh	47	7.00 /ea	168		/ea			215	236
	Instrument - PSL 23.1103	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - PE-23.1103	17400.000	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - PE-23.1105	17400.000	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - PSH-23.11.05	17400.000	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Instrument - PI-23.1107	17400.000	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Valve Ball Threaded SS 1/2in	15110.014	7.00 ea	39.25 /mh	275	19.00 /ea	133		/ea			408	531
	Stainless Steel Nipple 1/2" X 2"	15212.010	14.00 ea	39.25 /mh	137	10.00 /ea	140		/ea			277	339
	Stainless Steel Tee 1/2"	15212.040	2.00 ea	39.25 /mh	16	7.00 /ea	14		/ea			30	37
	Instrument -SV-23.1111	17000.001	1.00 ea	39.25 /mh	39	0.01 /ea	0		/ea			39	57
	Air Dryers with small conc pad	11000.140	2.00 ea	39.25 /mh	2,512	0.01 /ea	0		/ea			2,512	3,642
	Air Compressor Particulate & oil filters	11000.420	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Grout Sleeve 5in	15124.300	2.00 ea	39.25 /mh	79	5.00 /ea	10		/ea			89	124
	CA piping to and from compressor and storage tank 23-M01		80.00 lf		9,736		13,268					23,003	27,385
	150-4 1 WPSPS NPHW SS with 3000 LB fittings 23M01												
	Stainless Steel Pipe 1/2"	15212.005	40.00 lf	39.25 /mh	550	7.00 /lf	280		/lf			830	1,077
	Stainless Steel 45 Elbow 1/2"	15212.035	12.00 ea	39.25 /mh	165	30.00 /ea	360		/ea			525	599
	Stainless Steel Tee 1/2"	15212.035	4.00 ea	39.25 /mh	55	21.00 /ea	84		/ea			139	164
	Stainless Steel Coupling 1/2"	15212.025	2.00 ea	39.25 /mh	27	12.00 /ea	24		/ea			51	64
	Swedge lock fitting 1/2"	15219.120	5.00 ea	39.25 /mh	69	50.00 /ea	250		/ea			319	350
	Valve Ball Threaded SS 1/2in	15110.010	8.00 ea	39.25 /mh	320	148.00 /ea	1,184		/ea			1,504	1,648
	Sleeve Plastic CS-2-	15121.600	2.00 ea	39.25 /mh	157	78.00 /ea	156		/ea			313	384
	Link Seal Size LS-200-S	15123.100	16.00 ea	39.25 /mh	94	5.00 /ea	80		/ea			174	217
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls				
	Hose Rack	13900.110	3.00 ea	/ea		/ea			/ea				
	Heavy Duty Rubber Hose 1/2" x 100'	15220.120	3.00 ea	39.25 /mh	236	350.00 /ea	1,050		/ea			1,286	1,391
	Grout Sleeve 2in	15124.300	2.00 ea	39.25 /mh	157	5.00 /ea	10		/ea			167	238
	4' SS Flex fitting at hotsee	15220.110	1.00 ea	39.25 /mh	79	400.00 /ea	400		/ea			479	514
	WPSPS NPHW SS with 3000 LB fittings 23M01		40.00 lf		1,908		3,878					5,786	6,645
	150-55 80 WPSPS NPW Sch 80 SS Seal water system 23M01-00TM1												
	Stainless Steel Pipe 1"	15212.005	200.00 lf	39.25 /mh	2,748	15.00 /lf	3,000		/lf			5,748	6,984
	Stainless Steel 90 Elbow 1"	15212.040	24.00 ea	39.25 /mh	330	75.00 /ea	1,800		/ea			2,130	2,278
	Stainless Steel TEE 1"	15212.030	12.00 ea	39.25 /mh	165	160.00 /ea	1,920		/ea			2,085	2,159
	Stainless Steel Coupling 1"	15212.025	8.00 ea	39.25 /mh	110	55.00 /ea	440		/ea			550	599
	Stainless Steel Nipple 1" x 3"	15212.010	108.00 ea	39.25 /mh	1,484	15.00 /ea	1,620		/ea			3,104	3,771
	PVC Sch 80/UIT UNION 1" S	15211.219	6.00 ea	39.25 /mh	82	10.00 /ea	60		/ea			142	180

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-55 80 WSPSPS NPW Sch 80 SS Seal water system 23M01-00TM1												
	Valve Ball Threaded SS 1in	15110.014	21.00 ea	39.25 /mh	824	396.00 /ea	8,316		/ea			9,140	9,511
	PS Strut SS 1-5/8 x 1-5/8	15060.476	60.00 lf	39.25 /mh	707	21.00 /lf	1,260		/lf			1,967	2,284
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS 2 Piece Clamp SS 1in	15060.518	24.00 ea	39.25 /mh	283	6.00 /ea	144		/ea			427	554
	PS Expansion Anchor 1/2 x 7in SS	15060.127	16.00 ea	39.25 /mh	31	12.00 /ea	192		/ea			223	238
	Flex Conn Rubber 1"	15112.190	3.00 ea	39.25 /mh	158	200.00 /ea	600		/ea			758	829
	Stainless Steel Bushing mpt x fpt 1in x 3/4in	15212.015	3.00 ea	39.25 /mh	24	22.00 /ea	66		/ea			90	100
	Valve PRV stainless 150# 1"	15110.715	3.00 ea	39.25 /mh	353	350.00 /ea	1,050		/ea			1,403	1,562
	Control Valve 1" SV-23.1420 / SV-23.1520 / SV-23.1620	11200.060	3.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	342
	Strainer Wye 125# 1"	15112.430	6.00 ea	39.25 /mh	471	150.00 /ea	900		/ea			1,371	1,583
	Instrument - FE-23.1420FE / 23.1520 / FE-23.1620	17200.000	3.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	PS Snubber (?? Size)	15060.950	3.00 ea	39.25 /mh	341	300.00 /ea	900		/ea			1,241	1,395
	Instrument - Pressure - Gauge PI-23.1420 / PI-23.1520 / PI-23.1620	17400.000	3.00 ea	39.25 /mh	353	1,200.00 /ea	3,600		/ea			3,953	4,112
	Epoxy for Anchors	11000.250	1.00 ea	/ea		5.00 /ea	5		/ea			5	5
	Instrument - Flow - FI-23.1420 / FI-23-1520 / FI-23.1620	17200.000	3.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	Instrument - Pressure - Gauge PI -23.1412 / PI-23.1521 / PI-23.1621	17400.000	3.00 ea	39.25 /mh	471	1,200.00 /ea	3,600		/ea			4,071	4,283
	Instrument - Pressure - Switch PSH.23.1421 / PSH-231521 / PSH-23.1621	17400.000	3.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	Instrument - Pressure - Transmitter PE 23.1421 / PE-23.1521 / PE-23.1621	17400.000	3.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	Butcher Board Panel and struct rack SS	6420.500	3.00 ea	39.25 /mh	2,826	750.00 /ea	2,250		/ea			5,076	6,348
	WSPSPS NPW Sch 80 SS Seal water system 23M01-00TM1		200.00 lf		12,514		31,955					44,469	50,100
	PIPE Pipe				24,157		49,101					73,258	84,129
	23 - WPS PS West Primary Sludge Pump Station				24,157		49,101					73,258	84,129
	25 - EQ EQ Basins												
	PIPE Pipe												
	150-553 CA piping to EQ Basin control panel Stainless steel 25M03												
	Supply Steel Pipe Package	15233.405	1.00 ls	/ls		0.01 /ls	0		/ls			0	0
	Stainless Steel Pipe 3"	15212.005	137.00 lf	39.25 /mh	2,689	31.00 /lf	4,247		/lf			6,936	8,146
	Stainless Steel Tee 3"	15212.040	2.00 ea	39.25 /mh	39	120.00 /ea	240		/ea			279	297
	Stainless Steel 90 Elbow 3"	15212.040	9.00 ea	39.25 /mh	177	120.00 /ea	1,080		/ea			1,257	1,336
	Valve Ball Flanged SS 3in	15110.012	4.00 ea	39.25 /mh	314	5,200.00 /ea	20,800		/ea			21,114	21,255
	Stainless Steel Coupling 3"	15212.025	8.00 ea	39.25 /mh	63	80.00 /ea	640		/ea			703	731
	Stainless Steel flange 3"	15212.025	2.00 ea	39.25 /mh	16	85.00 /ea	170		/ea			186	193
	Stainless Steel Nipple 3" X 3.5"	15212.010	6.00 ea	39.25 /mh	78	27.00 /ea	162		/ea			240	275
	Camlock Adapter SS Female x FPT 3" for compressed air connection	15220.600	1.00 ea	39.25 /mh	29	500.00 /ea	500		/ea			529	543
	PS Pipe Strut Clamp SS 3in	15060.486	35.00 ea	39.25 /mh	412	14.00 /ea	490		/ea			902	1,088
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS Strut SS 1-5/8 x 1-5/8	15060.476	60.00 lf	39.25 /mh	707	21.00 /lf	1,260		/lf			1,967	2,284
	PS Anchor Bolt 1/2x6 SS	15060.020	96.00 ea	39.25 /mh	188	8.00 /ea	768		/ea			956	1,041
	PS Hex Nut SS 1/2	15060.354	96.00 ea	39.25 /mh	283	0.50 /ea	48		/ea			331	458
	PS Washer Flat 1/2 SS	15060.576	96.00 ea	39.25 /mh	942	0.50 /ea	48		/ea			990	1,414
	Epoxy for SS316 Anchors	5001.054	4.00 ea	39.25 /mh	8	5.00 /ea	20		/ea			28	31
	Flex Conn 150# SS Flange 3" per MP-310	15112.150	1.00 ea	39.25 /mh	66	325.00 /ea	325		/ea			391	421
	Stainless Steel Companion Flange 3	15212.084	2.00 ea	39.25 /mh	157	585.00 /ea	1,170		/ea			1,327	1,398
	CA piping to EQ Basin control panel Stainless steel 25M03		1.00 ls		6,214		32,200					38,414	41,210
	PIPE Pipe				6,214		32,200					38,414	41,210
	25 - EQ EQ Basins				6,214		32,200					38,414	41,210
	27 - ODOR Odor Control												
	PIPE Pipe												
	150-553 DP from sump pumps at Odor control Sch 10 SS 27M03												
	Stainless Steel Pipe 3"	15212.005	60.00 lf	39.25 /mh	1,178	31.00 /lf	1,860		/lf			3,038	3,567
	Stainless Steel Tee 3"	15212.035	2.00 ea	39.25 /mh	39	120.00 /ea	240		/ea			279	297
	Stainless Steel 90 Elbow 3"	15212.040	10.00 ea	39.25 /mh	196	120.00 /ea	1,200		/ea			1,396	1,485
	Valve Plug Flange 125# 3in	15110.650	4.00 ea	39.25 /mh	157	1,300.00 /ea	5,200		/ea			5,357	5,428
	Valve Ball Check Flange 125# 3in	15110.040	2.00 ea	39.25 /mh	79	1,200.00 /ea	2,400		/ea			2,479	2,514
	Stainless Steel Union 3"	15212.060	2.00 ea	39.25 /mh	79	192.00 /ea	384		/ea			463	498
	Stainless Steel Companion Flange 3	15212.084	12.00 ea	39.25 /mh	471	85.00 /ea	1,020		/ea			1,491	1,703
	Sleeve Plastic CS-5-	15121.600	2.00 ea	39.25 /mh	157	150.00 /ea	300		/ea			457	528
	Link Seal Size LS-300-S	15123.100	32.00 ea	39.25 /mh	188	8.00 /ea	256		/ea			444	529
	Fernco Cplng w/ 2 ea SS Pipe Clamps 3"	15112.550	1.00 ea	39.25 /mh	2	33.00 /ea	33		/ea			35	36
	PS Special Support for 3" SS Pipe MP-256	15060.475	6.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	Stainless Steel Nipple 3" X 6"	15212.010	2.00 ea	39.25 /mh	26	38.00 /ea	76		/ea			102	114
	Grout Sleeve 5in	15124.300	2.00 ea	39.25 /mh	157	5.00 /ea	10		/ea			167	238
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	DP from sump pumps at Odor control Sch 10 SS 27M03				3,513		13,029			50		16,592	18,173
	PIPE Pipe				3,513		13,029			50		16,592	18,173
	27 - ODOR Odor Control				3,513		13,029			50		16,592	18,173
	33 - NA North Aeration												
	PIPE Pipe												
	150-553 North aeration blower complex 33M04 blower piping Stainless steel												
	Supply Steel Pipe Package	15233.405	1.00 ls	/ls		0.01 /ls	0	0	/ls			0	0
	Fab Stainless Steel Pipe - 14" - 90	15233.505	1.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	341
	Fab Stainless Steel Pipe - 14" - flanges	15233.505	3.00 ea	39.25 /mh		0.01 /ea	0		/ea			0	0
	Fab Stainless Steel Pipe - 14" - 8"	15233.505	2.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	Valve - Butterfly 14" high perform	2519.150	1.00 ea	39.25 /mh	236	3,080.00 /ea	3,080		/ea			3,316	3,421
	Fab Stainless Steel Pipe - 20" x 14" red tee	15233.505	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-553 North aeration blower complex 33M04 blower piping Stainless steel												
	Valve - Butterfly 20"	2519.150	3.00 ea	39.25 /mh	942	6,600.00 /ea	19,800		/ea			20,742	21,166
	Fab Stainless Steel Pipe - 20" - flanges	15233.505	14.00 ea	39.25 /mh		0.01 /ea	0		/ea			0	0
	Fab Stainless Steel Pipe - 20" - 3' 2"	15233.505	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Fab Stainless Steel Pipe - 20" - 3'6"	15233.505	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Fab Stainless Steel Pipe - 20" - 2' 10"	15233.505	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Fab Stainless Steel Pipe - 20" - 3' 2"	15233.505	1.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Fab Stainless Steel Pipe - 20" - 90	15233.505	3.00 ea	39.25 /mh	942	0.01 /ea	0		/ea			942	1,366
	Fab Stainless Steel Pipe - 20" - 8"	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Flex Conn 150# SS Srd 10" Below	15112.160	2.00 ea	39.25 /mh	628	650.00 /ea	1,300		/ea			1,928	2,211
	Fab Stainless Steel Pipe - 20" - x ? redcer for blower connection	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - 1'6"	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - mitered elbow by blower manufacturer	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - 10"	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - flanges	15233.505	12.00 ea	39.25 /mh		0.01 /ea	0		/ea			0	0
	Valve - Butterfly 24"	2519.150	5.00 ea	39.25 /mh	1,570	8,140.00 /ea	40,700		/ea			42,270	42,977
	Fab Stainless Steel Pipe - 24" - tee	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - blind flange	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" - 90	15233.505	4.00 ea	39.25 /mh	1,256	0.01 /ea	0		/ea			1,256	1,821
	Fab Stainless Steel Pipe - 24" - 11'	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Fab Stainless Steel Pipe - 24" x ? blower inlet filter	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Roof Curb Pre manufacterd for blower inlet filter 304 SS	7720.100	2.00 ea	39.25 /mh	628	2,500.00 /ea	5,000		/ea			5,628	5,911
	Demo Roofing - Membrane	2220.680	80.00 sf	39.25 /mh	1,256	5.00 /sf	400		/sf			1,656	2,221
	Fab Stainless Steel Pipe - 14" - tee	15233.505	2.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Valve - Butterfly 14"	2519.150	4.00 ea	39.25 /mh	1,256	2,800.00 /ea	11,200		/ea			12,456	13,021
	Fab Stainless Steel Pipe - 14" - flanges	15233.505	8.00 ea	39.25 /mh		0.01 /ea	0		/ea			0	0
	Fab Stainless Steel Pipe - 14" - 90	15233.505	7.00 ea	39.25 /mh	1,649	0.01 /ea	0		/ea			1,649	2,390
	Fab Stainless Steel Pipe - 14" - 10'7"	15233.505	1.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	341
	Fab Stainless Steel Pipe - 14" - 1'9"	15233.505	1.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	341
	Fab Stainless Steel Pipe - 14" - 5'4"	15233.505	2.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	Fab Stainless Steel Pipe - 14" - 4'2"	15233.505	2.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	Fab Stainless Steel Pipe - 14" - vented caps for exhaust	15233.505	2.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	PS Special Support for 14in SS Pipe - 2'8" to centerline on roof	15060.475	4.00 ea	39.25 /mh	942	0.01 /ea	0		/ea			942	1,366
	Fab Stainless Steel Pipe - 20" - blind flange	15233.505	1.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	341
	Fab Stainless Steel Pipe - 14" - blind flange	15233.505	2.00 ea	39.25 /mh	314	0.01 /ea	0		/ea			314	455
	Insulation Subcontractor for blower piping	15403.100	1.00 ls	/ls		/ls			/ls				
	NBG Kit 125# Insulating 14in	15125.016	1.00 ea	39.25 /mh	79	1,500.00 /ea	1,500		/ea			1,579	1,614
	PS Clevis Hanger SS 14in	15060.096	1.00 ea	39.25 /mh	157	368.00 /ea	368		/ea			525	596
	PS Clevis Hanger SS 20in	15060.096	5.00 ea	39.25 /mh	785	1,419.00 /ea	7,095		/ea			7,880	8,233
	PS Clevis Hanger SS 24in	15060.096	2.00 ea	39.25 /mh	314	2,349.00 /ea	4,698		/ea			5,012	5,153
	PS Misc Hardware for Clevis Hanger Assemblies 14"	15060.290	1.00 ea	39.25 /mh	10	150.00 /ea	150		/ea			160	164
	PS Misc Hardware for Clevis Hanger Assemblies 20"	15060.290	5.00 ea	39.25 /mh	49	200.00 /ea	1,000		/ea			1,049	1,071
	PS Misc Hardware for Clevis Hanger Assemblies 24"	15060.290	2.00 ea	39.25 /mh	20	250.00 /ea	500		/ea			520	528
	PS Riser Clamp SS 12 for roof penetration	15060.450	2.00 ea	39.25 /mh	23	150.00 /ea	300		/ea			323	333
	PS Riser Clamp SS 24 for roof penetration	15060.450	2.00 ea	39.25 /mh	24	250.00 /ea	500		/ea			524	534
	Supply Steel Pipe Package	15233.405	1.00 ls	/ls		0.01 /ls	0		/ls			0	0
	Core Drilled Hole - 26 -8"	15122.100	2.00 ea	39.25 /mh	314	1.00 /ea	2	1,400	/ea			1,716	1,857
	Instrument -PE-33.0171 / PDSH-33.0171 Diff pressure	17000.001	1.00 ea	39.25 /mh	39	1,200.00 /ea	1,200		/ea			1,239	1,257
	Valve Ball Flange SS 1/2in	15110.010	4.00 ea	39.25 /mh	160	226.00 /ea	904		/ea			1,064	1,136
	Stainless Steel Nipple 1/2" X 2"	15212.010	8.00 ea	39.25 /mh	79	10.00 /ea	80		/ea			159	194
	Stainless Steel Tee 1/2"	15212.035	2.00 ea	39.25 /mh	16	21.00 /ea	42		/ea			58	65
	Instrument -PE-33.0181 / PSH -33.0181 Diff pressure	17000.001	1.00 ea	39.25 /mh	39	1,200.00 /ea	1,200		/ea			1,239	1,257
	Core Drilled Hole - 12 -*	15122.100	2.00 ea	39.25 /mh	314	1.00 /ea	2	700	/ea			1,016	1,157
	North aeration blower complex 33M04 blower piping Stainless steel				24,714		101,022	2,100				127,836	138,957
	PIPE Pipe				24,714		101,022	2,100				127,836	138,957
	33 - NA North Aeration				24,714		101,022	2,100				127,836	138,957
	36 - SC 3&4 Secondary Clarifiers #3 and #4												
	PIPE Pipe												
	150-01 1c 12042002 Secondary clarifier #3 scum line 36M05 Sch 10 SS												
	NBG Kit 125# Insulating 6in	15125.016	1.00 ea	39.25 /mh	39	516.00 /ea	516		/ea			555	573
	Fab Stainless Steel Pipe - 6" - 3'	15233.505	1.00 ea	39.25 /mh	236	0.01 /ea	0		/ea			236	341
	NBG Kit 125# SS 6in	15125.012	2.00 ea	39.25 /mh	79	76.00 /ea	152		/ea			231	266
	Fab Stainless Steel Pipe - 6" - 2'6" with flange	15233.505	1.00 ea	39.25 /mh	118	0.01 /ea	0		/ea			118	171
	PS Special Support for 6" for scum line	15060.475	1.00 ea	39.25 /mh	314	1,500.00 /ea	1,500		/ea			1,814	1,955
	Fab Stainless Steel Pipe - 6" - 90 elbow	15233.505	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Fernco Cplng w/ 2 ea SS Pipe Clamps 6"	15112.550	1.00 ea	39.25 /mh	79	61.00 /ea	61		/ea			140	175
	Supply Stainless Steel Pipe Package	15233.505	1.00 ls	/ls		0.01 /ls	0		/ls			0	0
	Secondary clarifier #3 scum line 36M05 Sch 10 SS				942		2,229					3,171	3,595
	150-01 1c 12042002 Secondary Clarifier #4 scum line 35M03 Sch 10 SS												
	NBG Kit 125# Insulating 6in	15125.016	1.00 ea	39.25 /mh	39	516.00 /ea	516		/ea			555	573
	NBG Kit 125# SS 6in	15125.012	2.00 ea	39.25 /mh	79	76.00 /ea	152		/ea			231	266
	Fab Stainless Steel Pipe - 6" - 6'8" with flange	15233.505	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	PS Special Support for 6" scum line	15060.475	2.00 ea	39.25 /mh	628	1,500.00 /ea	3,000		/ea			3,628	3,911
	Fab Stainless Steel Pipe - 6" - 3'9"	15233.505	1.00 ea	39.25 /mh	79	0.01 /ea	0		/ea			79	114
	Fernco Cplng w/ 2 ea SS Pipe Clamps 6"	15112.550	1.00 ea	39.25 /mh	2	61.00 /ea	61		/ea			63	64
	Fab Stainless Steel Pipe - 6" - 90	15233.505	1.00 ea	39.25 /mh	59	0.01 /ea	0		/ea			59	85
	Supply Stainless Steel Pipe Package	15233.505	1.00 ls	/ls		0.01 /ls	0		/ls			0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Secondary Clarifier #4 scum line 35M03 Sch 10 SS				964		3,729					4,693	5,126
	PIPE Pipe				1,906		5,958					7,864	8,721
	36 - SC 3&4 Secondary Clarifiers #3 and #4				1,906		5,958					7,864	8,721
	400523.01 Stainless Steel Pipe & Tubing				63,873		208,789	323,662		50		596,374	625,117
400531.01	Plastic Piping & Tubing												
	00 - SITE Site												
	PIPE Pipe												
	02610- CST from EQ pump to clarifier #2 00C21 Sch 80 PVC												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 0- 4'	2333.010	60.00 lf	39.25 /mh	283	/lf			/lf			283	410
	Trench Backfill 0- 4'	2333.020	60.00 lf	39.25 /mh	471	/lf			/lf			471	683
	Utility Bedding Peastone	2305.200	8.89 bcy	/cy		30.00 /ton	426		/cy			426	426
	Spoils to Waste	2333.060	8.89 cy	39.25 /mh	35	/cy			/cy			35	51
	PVC Sch-80 Pipe 3/4 Bell End	2336.110	60.00 lf	39.25 /mh	495	2.00 /lf	120		/lf			615	837
	PVC Sch 80 90 ell 3/4 SOC	2336.120	2.00 ea	39.25 /mh	16	3.00 /ea	6		/ea			22	30
	PVC Sch-80 45 Bend 3/4 SOC	2336.120	2.00 ea	39.25 /mh	16	6.00 /ea	12		/ea			28	36
	PVC Sch 80 Tee 3/4 SOC	2336.160	1.00 ea	39.25 /mh	8	6.00 /ea	6		/ea			14	18
	PVC Sch 80 Coupling 3/4" SOC	2336.180	4.00 ea	39.25 /mh	33	5.00 /ea	20		/ea			53	68
	PVC Sch 80 Caps 3/4 SOC	2336.130	3.00 ea	39.25 /mh	25	4.00 /ea	12		/ea			37	48
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	736	280	1,016	1,016
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	576	240	816	816
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	400	96	496	496
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mn th			400.00 /Mnth	32	8	40	40
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	260	40	300	300
	Tie to Existing CST	2333.010	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Warning Tape Detectable	2333.080	100.00 lf	39.25 /mh	39	0.12 /lf	12		/lf			51	69
	Tracer Wire	2333.080	100.00 lf	39.25 /mh	39	1.52 /lf	167		/lf			206	224
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Core Drilled Hole - 3 x18"	15122.100	2.00 ea	39.25 /mh	79	1.00 /ea	2	200	/ea			281	316
	Link Seal Size LS-315-S	15123.100	16.00 ea	39.25 /mh	94	13.00 /ea	208		/ea			302	345
	Core Drilled Hole - 2 -8"	15122.100	2.00 ea	39.25 /mh	79	1.00 /ea	2	200	/ea			281	316
	Grout holes 8in	15124.300	2.00 ea	39.25 /mh	157	10.00 /ea	20		/ea			177	248
	Grout Sleeve 3in	15124.300	2.00 ea	39.25 /mh	79	5.00 /ea	10		/ea			89	124
	CST from EQ pump to clarifier #2 00C21 Sch 80 PVC		60.00 lf		2,654		1,314	400		2,054	664	7,085	8,279
	02616- HDPE SDR11 NONPotable water 00C21 and 00C22												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 4- 6'	2333.010	397.00 lf	39.25 /mh	2,337	/lf			/lf			2,337	3,389
	Trench Backfill 4- 6"	2333.020	397.00 lf	39.25 /mh	3,116	/lf			/lf			3,116	4,519
	Utility Bedding Peastone	2305.200	224.58 bcy	/cy		30.00 /ton	10,780		/cy			10,780	10,780
	Spoils to Waste	2333.060	224.74 cy	39.25 /mh	882	/cy			/cy			882	1,279
	HD PE Pipe 2 SDR 11	2631.301	407.00 lf	39.25 /mh	1,597	2.00 /lf	855		/lf			2,452	3,171
	HD PE 90 bend 2 DR 17	2631.314	6.00 ea	39.25 /mh	471	7.00 /ea	42		/ea			513	725
	HD PE 45 bend 2 SDR 11	2631.314	5.00 ea	39.25 /mh	393	7.00 /ea	35		/ea			428	604
	HD PE Pipe Cap 2 SDR 11	2631.350	5.00 ea	39.25 /mh	393	3.00 /ea	15		/ea			408	584
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	4,600	1,750	6,350	6,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	3,600	1,500	5,100	5,100
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	2,500	600	3,100	3,100
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			400.00 /Mnth	200	50	250	250
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	1,625	250	1,875	1,875
	Pot Hole Existing existing CST lines	2333.010	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Tie to Existing IRR line	2333.010	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Warning Tape Detectable	2333.080	440.00 lf	39.25 /mh	173	0.12 /lf	53		/lf			226	303
	Tracer Wire	2333.080	440.00 lf	39.25 /mh	173	1.52 /lf	736		/lf			908	986
	Tracer Wire Test Box	2333.080	6.00 ea	39.25 /mh	942	95.00 /ea	570		/ea			1,512	1,936
	Yard Hydrant	2510.200	2.00 ea	39.25 /mh	942	330.00 /ea	660		/ea			1,602	2,026
	Connect to Hydrant and Misc HDPE fittings for connection	2510.200	1.00 ea	39.25 /mh	39	50.00 /ea	50		/ea			89	107
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	3.00 Mnth	/Mnth		/Mn th			750.00 /Mnth	2,250		2,250	2,250
	HDPE TEE 2" SDR 11	15211.411	2.00 ea	39.25 /mh	157	9.00 /ea	18		/ea			175	246
	Flow Fill at pipe crossings	3310.100	6.00 cy	39.25 /mh	471	180.00 /cy	1,134		/cy			1,605	1,817
	HDPE SDR11 NONPotable water 00C21 and 00C22		397.00 lf		13,107		15,047			14,825	4,150	47,129	53,026
	PIPE Pipe				15,760		16,361	400		16,879	4,814	54,214	61,306
	00 - SITE Site				15,760		16,361	400		16,879	4,814	54,214	61,306
	400531.01 Plastic Piping & Tubing				15,760		16,361	400		16,879	4,814	54,214	61,306
400531.14	PVC Pipe: Pressure												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
00 - GEN	General												
	PIPE Pipe												
	02606- Temp sewer line for Office trailers												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 0- 4'	2333.010	360.00 lf	39.25 /mh	2,120	/lf			/lf			2,120	3,073
	Trench Backfill 0- 4'	2333.020	360.00 lf	39.25 /mh	2,826	/lf			/lf			2,826	4,098
	Utility Bedding Peastone	2305.200	52.75 bcy	/cy		30.00 /ton	2,532		/cy			2,532	2,532
	Spoils to Waste	2333.060	53.33 cy	39.25 /mh	209	/cy			/cy			209	304
	PVC SDR 35 4	2336.422	360.00 lf	39.25 /mh	1,413	3.40 /lf	1,285		/lf			2,698	3,334
	PVC SDR 35 90 ell 4	2336.424	8.00 ea	39.25 /mh	157	20.00 /ea	160		/ea			317	388
	PVC SDR 35 45 bend 4	2336.424	4.00 ea	39.25 /mh	79	24.00 /ea	96		/ea			175	210
	PVC SDR 35 Wye 6	2336.428	6.00 ea	39.25 /mh	118	35.00 /ea	210		/ea			328	381
	PVC SDR 35 Pipe Cap 4	2336.434	6.00 ea	39.25 /mh	118	15.00 /lf	90		/ea			208	261
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.16 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	1,509	574	2,083	2,083
	John Deere 624 Loader (172 HP) (M)	1900.132	0.16 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	1,181	492	1,673	1,673
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	410	98	508	508
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mn th			400.00 /Mnth	33	8	41	41
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	267	41	308	308
	CISP Cleanout Assembly	15150.020	3.00 ea	39.25 /mh	471	150.00 /ea	450		/ea			921	1,133
	Temp sewer line for Office trailers		360.00 lf		8,138		4,873			3,449	1,214	17,674	21,336
	PIPE Pipe				8,138		4,873			3,449	1,214	17,674	21,336
	00 - GEN General				8,138		4,873			3,449	1,214	17,674	21,336
00 - SITE	Site												
	PIPE Pipe												
	02605- FA below grade C900 DR25 00C22												
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	39.25 /mh	1,256	50.00 /ea	100		50.00 /ea	100		1,456	2,021
	Trench Excavtion 4- 6'	2333.010	742.00 lf	39.25 /mh	4,369	/lf			/lf			4,369	6,334
	Trench Excavtion 6- 8'	2333.010	43.00 lf	39.25 /mh	422	/lf			/lf			422	612
	Trench Backfill 4- 6'	2333.020	742.00 lf	39.25 /mh	7,281	/lf			/lf			7,281	10,557
	Trench Backfill 6- 8'	2333.020	43.00 lf	39.25 /mh	591	/lf			/lf			591	857
	Utility Bedding Peastone	2305.200	438.42 bcy	/cy		30.00 /ton	21,044		/cy			21,044	21,044
	Spoils to Waste	2333.060	465.18 cy	39.25 /mh	1,826	/cy			/cy			1,826	2,647
	PVC C-900 Pipe 14	2336.310	137.00 lf	39.25 /mh	1,613	57.00 /lf	8,199		/lf			9,813	10,539
	PVC C-900 Pipe 20	2336.310	384.00 lf	39.25 /mh	4,522	83.00 /lf	33,466		/lf			37,987	40,022
	PVC C-900 Pipe 24	2336.310	97.00 lf	39.25 /mh	1,142	120.00 /lf	12,222		/lf			13,364	13,878
	PVC C-900 Pipe 10	2336.310	109.00 lf	39.25 /mh	1,283	35.00 /lf	4,006		/lf			5,289	5,867
	PVC C-900 90 ell 14	2336.320	8.00 ea	39.25 /mh	628	1,353.00 /ea	10,824		/ea			11,452	11,735
	PVC C-900 90 ell 20	2336.320	3.00 ea	39.25 /mh	353	2,794.00 /ea	8,382		/ea			8,735	8,894
	PVC C-900 Pipe 16	2336.310	15.00 lf	39.25 /mh	177	57.00 /lf	898		/lf			1,074	1,154
	PVC C-900 Pipe 18	2336.310	43.00 lf	39.25 /mh	506	68.00 /lf	3,070		/lf			3,577	3,804
	PVC C-900 90 ell 24	2336.320	6.00 ea	39.25 /mh	942	4,177.00 /ea	25,062		/ea			26,004	26,428
	PVC C-900 90 ell 10	2336.320	1.00 ea	39.25 /mh	79	535.00 /ea	535		/ea			614	649
	PVC C-900 Tee 20 x 14	2336.360	2.00 ea	39.25 /mh	314	7,082.00 /ea	14,164		/ea			14,478	14,619
	PVC C-900 Tee 24	2336.360	2.00 ea	39.25 /mh	393	9,446.00 /ea	18,892		/ea			19,285	19,461
	PVC C-900 90 ell 16	2336.320	1.00 ea	39.25 /mh	157	1,748.00 /ea	1,748		/ea			1,905	1,976
	PVC C-900 Tee 24 x 18	2336.360	1.00 ea	39.25 /mh	196	4,720.00 /ea	4,720		/ea			4,916	5,005
	PVC C-900 45 bend 10	2336.320	1.00 ea	39.25 /mh	39	535.00 /ea	535		/ea			574	592
	PVC C-900 Reducer 20 x 14	2336.350	1.00 ea	39.25 /mh	118	1,335.00 /ea	1,335		/ea			1,453	1,506
	PVC C-900 Caps 14	2336.330	1.00 ea	39.25 /mh	39	507.00 /ea	507		/ea			546	564
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.75 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	6,900	2,625	9,525	9,525
	John Deere 624 Loader (172 HP) (M)	1900.132	0.75 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	5,400	2,250	7,650	7,650
	PVC C-900 Reducer 24 x 20	2336.350	1.00 ea	39.25 /mh	157	2,426.00 /ea	2,426		/ea			2,583	2,654
	PVC C-900 Tee 18 x 16	2336.360	1.00 ea	39.25 /mh	157	3,455.00 /ea	3,455		/ea			3,612	3,683
	Water Truck, 4,000 Gallon (L)	1900.210	0.75 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	3,750	900	4,650	4,650
	Mikasa Jumping Jack Compactor (L)	1900.138	0.75 Mnth	/Mnth		/Mn th			400.00 /Mnth	300	75	375	375
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.75 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	2,438	375	2,813	2,813
	PVC C-900 Reducer 18 x 10	2336.350	1.00 ea	39.25 /mh	157	1,238.00 /ea	1,238		/ea			1,395	1,466
	DI MEGALUG for PVC 14"	2511.612	19.00 ea	39.25 /mh		309.00 /ea	5,871		/ea			5,871	5,871
	DI MEGALUG for PVC 20"	2511.612	12.00 ea	39.25 /mh		640.00 /ea	7,680		/ea			7,680	7,680
	Warning Tape Detectable	2333.080	800.00 lf	39.25 /mh	314	0.12 /lf	96		/lf			410	551
	Tracer Wire	2333.080	800.00 lf	39.25 /mh	314	1.52 /lf	1,338		/lf			1,652	1,793
	Tracer Wire Test Box	2333.080	10.00 ea	39.25 /mh	1,570	95.00 /ea	950		/ea			2,520	3,227
	DI MEGALUG for PVC 10"	2511.612	5.00 ea	39.25 /mh		239.00 /ea	1,195		/ea			1,195	1,195
	DI MEGALUG for PVC 16"	2511.612	3.00 ea	39.25 /mh		394.00 /ea	1,182		/ea			1,182	1,182
	DI MEGALUG for PVC 24"	2511.612	9.00 ea	39.25 /mh		658.00 /ea	5,922		/ea			5,922	5,922
	10 Bell Restrainer F/C900	2336.380	6.00 ea	39.25 /mh	471	275.00 /ea	1,650		/ea			2,121	2,333
	14 Bell Restrainer F/C900	2336.380	8.00 ea	39.25 /mh	628	394.00 /ea	3,152		/ea			3,780	4,063
	18 Bell Restrainer F/C900	2336.380	3.00 ea	39.25 /mh	353	567.00 /ea	1,701		/ea			2,054	2,213

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02605- FA below grade C900 DR25 00C22												
	20 Bell Restrainer F/C900	2336.380	20.00 ea	39.25 /mh	2,355	810.00 /ea	16,200		/ea			18,555	19,615
	24 Bell Restrainer F/C900	2336.380	5.00 ea	39.25 /mh	785	1,035.00 /ea	5,175		/ea			5,960	6,313
	DI MEGALUG for PVC 18"	2511.612	4.00 ea	39.25 /mh		438.00 /ea	1,752		/ea			1,752	1,752
	Trench Wrap at joints	2333.040	217.00 LF	39.25 /mh	4,259	1.00 /LF	239		/LF			4,497	6,414
	Poly Wrap for restraints	7260.100	182.00 LF	39.25 /mh	3,572	4.90 /LF	954		/LF			4,526	6,133
	Poly Tape	2333.090	5.00 roll	/roll		8.00 /roll	44		/roll			44	44
	Flow Fill at pipe crossings	3310.100	4.00 cy	/cy		180.00 /cy	756		/cy			756	756
	FA below grade C900 DR25 00C22		780.00 lf		43,337		232,684			18,888	6,225	301,134	320,635
	02605-1 6" FA PVC C900 DR25 tie in to existing at EQ pump station 00C21												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 4- 6'	2333.010	20.00 lf	39.25 /mh	79	/lf			/lf			79	114
	Trench Backfill 4- 6'	2333.020	20.00 lf	39.25 /mh	118	/lf			/lf			118	171
	Utility Bedding Peastone	2305.200	3.30 bcy	/cy		30.00 /ton	158		/cy			158	158
	Spoils to Waste	2333.060	3.33 cy	39.25 /mh	13	/cy			/cy			13	19
	PVC C-900 Pipe 6	2336.310	10.00 lf	39.25 /mh	39	15.00 /lf	158		/lf			197	214
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	39.25 /mh	20	234.00 /ea	234		/ea			254	262
	DI MJ Std Wgt 45 6	2511.214	1.00 ea	39.25 /mh	20	192.00 /ea	192		/ea			212	220
	DI MJ Compact Cap 6	2511.310	2.00 ea	39.25 /mh	39	116.00 /ea	232		/ea			271	289
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	39.25 /mh	24	346.00 /ea	346		/ea			370	380
	DI MEGALUG for PVC 6"	2511.612	8.00 ea	39.25 /mh	94	94.00 /ea	752		/ea			846	889
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	140	508	508
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	288	120	408	408
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	200	48	248	248
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			400.00 /Mnth	16	4	20	20
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	130	20	150	150
	Tie to Existing	2333.010	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Warning Tape Detectable	2333.080	30.00 lf	39.25 /mh	12	0.12 /lf	4		/lf			15	21
	Tracer Wire	2333.080	30.00 lf	39.25 /mh	12	1.52 /lf	50		/lf			62	67
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Trenton wax tape, 6" x 9' Roll	2333.100	13.00 ea	39.25 /mh	255	57.00 /ea	741		/ea			996	1,111
	6 Bell Restrainer F/C900	2336.380	2.00 ea	39.25 /mh	20	65.00 /ea	130		/ea			150	158
	Poly Wrap for restraints	7260.100	4.00 LF	39.25 /mh	0	4.90 /LF	21		/LF			21	21
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	2.00 cy	/cy		180.00 /cy	378		/cy			378	378
	6" FA PVC C900 DR25 tie in to existing at EQ pump station 00C21		20.00 lf		1,450		3,694			1,052	332	6,528	7,181
	02610- DP from odor control to Weir Sch 80 PVC 00C21												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 0- 4'	2333.010	115.00 lf	39.25 /mh	542	/lf			/lf			542	785
	Trench Backfill 0- 4'	2333.020	115.00 lf	39.25 /mh	1,128	/lf			/lf			1,128	1,636
	Utility Bedding Peastone	2305.200	16.93 bcy	/cy		30.00 /ton	813		/cy			813	813
	Spoils to Waste	2333.060	17.04 cy	39.25 /mh	67	/cy			/cy			67	97
	PVC Sch-80 Pipe 3 Bell End	2336.110	115.00 lf	39.25 /mh	722	8.00 /lf	920		/lf			1,642	1,967
	PVC Sch 80 90 ell 3 SOC	2336.120	4.00 ea	39.25 /mh	157	18.00 /ea	72		/ea			229	300
	PVC Sch-80 45 Bend 3 SOC	2336.120	1.00 ea	39.25 /mh	39	40.00 /ea	40		/ea			79	97
	PVC Sch 80 Caps 3 SOC	2336.130	2.00 ea	39.25 /mh	79	35.00 /ea	70		/ea			149	184
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	700	2,540	2,540
	John Deere 624 Loader (172 HP) (M)	1900.132	0.20 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,440	600	2,040	2,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.20 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,000	240	1,240	1,240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			400.00 /Mnth	80	20	100	100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	650	100	750	750
	Cross Existing	2333.010	5.00 ea	39.25 /mh	785	500.00 /ea	2,500		/ea			3,285	3,638
	Support Existing	2333.010	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Warning Tape Detectable	2333.080	130.00 lf	39.25 /mh	51	0.12 /lf	16		/lf			67	90
	Tracer Wire	2333.080	130.00 lf	39.25 /mh	51	1.52 /lf	217		/lf			268	291
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Insulation Subcontractor insulate DR piping in less than 4'	15403.100	1.00 ls	/ls		/ls			/ls				
	Flow Fill at pipe crossings	3310.100	6.00 cy	/cy		180.00 /cy	1,134		/cy			1,134	1,134
	PVC Sch 80 Cemnet	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	DP from odor control to Weir Sch 80 PVC 00C21		115.00 lf		4,877		6,227			5,060	1,660	17,824	20,019
	PIPE Pipe				49,664		242,606			25,000	8,217	325,486	347,835
	00 - SITE Site				49,664		242,606			25,000	8,217	325,486	347,835
	16 - EQEQUIP EQ Equipment Room												
	PIPE Pipe												
	150-55 80 EQ Equipment room CST piping SCH 80 PVC 16M01												
	PVC Sch 80 PIPE 3/4" PE	15211.203	80.00 lf	39.25 /mh	722	1.30 /lf	104		/lf			826	1,151

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-55 80 EQ Equipment room CST piping SCH 80 PVC 16M01												
	PVC Sch 80 90 EL 3/4" S	15211.207	12.00 ea	39.25 /mh	99	3.00 /ea	36		/ea			135	179
	PVC Sch 80 45 EL 3/4" SOCxSOC	15211.208	2.00 ea	39.25 /mh	16	6.00 /ea	12		/ea			28	36
	PVC Sch 80 TEE 3/4" S	15211.211	4.00 ea	39.25 /mh	33	6.00 /ea	24		/ea			57	72
	PVC Sch 80 Straight CPLG 3/4" S	15211.204	5.00 ea	39.25 /mh	41	5.00 /ea	25		/ea			66	85
	PVC Sch 80 MALE ADPT 3/4" SXMT	15211.217	4.00 ea	39.25 /mh	33	5.00 /ea	20		/ea			53	68
	PVC Sch 80 FEM ADPT 3/4" SXT	15211.218	4.00 ea	39.25 /mh	33	5.00 /ea	20		/ea			53	68
	PVC Sch 80 CAP 3/4" S	15211.228	4.00 ea	39.25 /mh	33	4.00 /ea	16		/ea			49	64
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt			50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PVC Valve Ball True Union Viton 1" S & T	15211.310	4.00 ea	39.25 /mh	33	126.00 /ea	504		/ea			537	552
	PS Strut SS 1-5/8 x 1-5/8	15060.476	40.00 lf	39.25 /mh	471	21.00 /lf	840		/lf			1,311	1,523
	PS 2 Piece Clamp SS 3/4 in	15060.518	20.00 ea	39.25 /mh	236	6.00 /ea	120		/ea			356	461
	PS Expansion Anchor 3/8 x 5in SS	15060.127	40.00 ea	39.25 /mh	79	5.00 /ea	200		/ea			279	314
	Garden Hose fitting 3/4	15220.110	4.00 ea	39.25 /mh	39	10.00 /ea	40		/ea			79	97
	Core Drilled Hole - 3 -20"	15122.100	3.00 ea	39.25 /mh	118	1.00 /ea	3	300	/ea			421	474
	Link Seal Size LS-315-S	15123.100	17.00 ea	39.25 /mh	100	13.00 /ea	221		/ea			321	366
	Tie to Existing	2333.010	4.00 ea	39.25 /mh	314	50.00 /ea	200		/ea			514	655
	Insulation Subcontractor insulation cst lines outside	15403.100	2.00 ls	/ls		/ls			/ls				
	Heat Trace to Wier structure HT-16.1208	16000.001	2.00 ls	/ls		/ls			/ls				
	PS Hex Nut SS 3/8	15060.354	40.00 ea	39.25 /mh	79	0.17 /ea	7		/ea			85	121
	PS Washer Flat 3/8 SS	15060.576	40.00 ea	39.25 /mh	39	0.50 /ea	20		/ea			59	77
	Grout pipe 2 in	15124.300	3.00 ea	39.25 /mh	118	5.00 /ea	15		/ea			133	186
	EQ Equipment room CST piping SCH 80 PVC 16M01		80.00 lf		2,635		2,529	300				5,464	6,650
	PIPE Pipe				2,635		2,529	300				5,464	6,650
	16 - EQEQUIP EQ Equipment Room				2,635		2,529	300				5,464	6,650
23 - WPS	PS West Primary Sludge Pump Station												
	PIPE Pipe												
	150-55 80 WPSPS NPW SCH 80 pvc 23M01												
	PVC Sch 80 PIPE 3/4" PE	15211.203	40.00 lf	39.25 /mh	361	1.30 /lf	52		/lf			413	576
	PVC Sch 80 PIPE 2" PE	15211.203	100.00 lf	39.25 /mh	824	9.00 /lf	900		/lf			1,724	2,095
	PVC Sch 80 90 EL 3/4" S	15211.207	6.00 ea	39.25 /mh	49	3.00 /ea	18		/ea			67	90
	PVC Sch 80 90 EL 2" S	15211.207	6.00 ea	39.25 /mh	71	7.00 /ea	42		/ea			113	144
	PVC Sch 80 TEE 2" S	15211.211	3.00 ea	39.25 /mh	35	24.00 /ea	72		/ea			107	123
	PVC Sch 80 Cement	15211.201	3.00 qt	/qt		45.00 /qt	149		/qt			149	149
	PVC Sch 80 Straight CPLG 3/4" S	15211.204	2.00 ea	39.25 /mh	16	5.00 /ea	10		/ea			26	34
	PVC Sch 80 Straight CPLG 2" S	15211.204	6.00 ea	39.25 /mh	71	14.00 /ea	84		/ea			155	186
	PVC Sch 80 MALE ADPT 3/4" SXMT	15211.217	3.00 ea	39.25 /mh	25	5.00 /ea	15		/ea			40	51
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		48.00 /qt	106		/qt			106	106
	PVC Sch 80 Concentric Reducer Coupling 2X3/4 S	15211.205	3.00 ea	39.25 /mh	35	10.00 /ea	30		/ea			65	81
	PVC Sch 80 TEE 2X2X3/4" S	15211.252	2.00 ea	39.25 /mh	24	16.00 /ea	32		/ea			56	66
	PVC Valve Ball True Union Viton 3/4" S	15211.310	5.00 ea	39.25 /mh	59	68.00 /ea	340		/ea			399	425
	PVC Valve Ball True Union Viton 2" S	15211.310	3.00 ea	39.25 /mh	35	175.00 /ea	525		/ea			560	576
	PS Strut SS 1-5/8 x 1-5/8	15060.476	80.00 lf	39.25 /mh	942	21.00 /lf	1,680		/lf			2,622	3,046
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS 2 Piece Clamp SS 3/4 in	15060.518	12.00 ea	39.25 /mh	141	6.00 /ea	72		/ea			213	277
	PS 2 Piece Clamp SS 2in	15060.518	25.00 ea	39.25 /mh	294	12.00 /ea	300		/ea			594	727
	PS Expansion Anchor 1/2 x 7in SS	15060.127	100.00 ea	39.25 /mh	196	12.00 /ea	1,200		/ea			1,396	1,485
	PS Clevis Hanger SS 1in	15060.096	12.00 ea	39.25 /mh	141	8.00 /ea	96		/ea			237	301
	PS Threaded Rod 1/2in SS	15060.502	36.00 lf	39.25 /mh	141	5.00 /lf	180		/lf			321	385
	PS Hex Nut SS 1/2	15060.354	36.00 ea	39.25 /mh	106	0.50 /ea	18		/ea			124	172
	PS Washer Flat 1/2 SS	15060.576	36.00 ea	39.25 /mh	353	0.50 /ea	18		/ea			371	530
	PS Expansion Anchor 1/2 x 5-1/4in SS	15060.127	12.00 ea	39.25 /mh	24	12.00 /ea	144		/ea			168	178
	Sleeve Plastic CS-4-	15121.600	1.00 ea	39.25 /mh	79	127.00 /ea	127		/ea			206	241
	Sleeve Plastic CS-3-	15121.600	3.00 ea	39.25 /mh	236	86.00 /ea	258		/ea			494	599
	Link Seal Size LS-315-S	15123.100	24.00 ea	39.25 /mh	141	13.00 /ea	312		/ea			453	517
	Link Seal Size LS-300-S	15123.100	12.00 ea	39.25 /mh	71	8.00 /ea	96		/ea			167	198
	Hose Bib 3/4"	15110.455	3.00 ea	39.25 /mh	236	20.00 /ea	60		/ea			296	401
	swedgelockCoupling 2"	2517.101	1.00 ea	39.25 /mh	39	50.00 /ea	53		/ea			92	109
	Grout Sleeve 3in	15124.300	3.00 ea	39.25 /mh	118	5.00 /ea	15		/ea			133	186
	Grout Sleeve 4in	15124.300	1.00 ea	39.25 /mh	39	5.00 /ea	5		/ea			44	62
	WPSPS NPW SCH 80 pvc 23M01		140.00 lf		4,950		7,240					12,189	14,417
	PIPE Pipe				4,950		7,240					12,189	14,417
	23 - WPS PS West Primary Sludge Pump Station				4,950		7,240					12,189	14,417
24 - EQPS	EQ Pump Station												
	PIPE Pipe												
	02610- EQ Equipmeny room side CST SCH 80 PVC Per Curt												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 0- 4'	2333.010	120.00 lf	39.25 /mh	377	/lf			/lf			377	546
	Trench Backfill 0- 4'	2333.020	120.00 lf	39.25 /mh	471	/lf			/lf			471	683
	Utility Bedding Peastone	2305.200	17.77 bcy	/cy		30.00 /ton	853		/cy			853	853
	Spoils to Waste	2333.060	17.78 cy	39.25 /mh	70	/cy			/cy			70	101
	PVC Sch-80 Pipe 3/4 Bell End	2336.110	400.00 lf	39.25 /mh	2,512	2.00 /lf	800		/lf			3,312	4,442
	PVC Sch 80 90 ell 3/4 SOC	2336.120	20.00 ea	39.25 /mh	94	3.00 /ea	60		/ea			154	197
	PVC Sch 80 Tee 3/4 SOC	2336.160	2.00 ea	39.25 /mh	2	6.00 /ea	12		/ea			14	15
	PVC Sch 80 Coupling 3/4" SOC	2336.180	20.00 ea	39.25 /mh	94	5.00 /ea	100		/ea			194	237

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02610- EQ Equipmeny room side CST SCH 80 PVC Per Curt												
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	700	2,540	2,540
	John Deere 624 Loader (172 HP) (M)	1900.132	0.20 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,440	600	2,040	2,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.20 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,000	240	1,240	1,240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			400.00 /Mnth	80	20	100	100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.20 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	650	100	750	750
	PVC Valve Ball True Union EPDM 3/4" S	15211.320	2.00 ea	39.25 /mh	16	109.00 /ea	218		/ea			234	242
	PVC Sch 40 Cement	15211.101	1.00 qt	/qt		45.00 /qt	50		/qt			50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PS Pipe Strut Clamp SS 3/4"	15060.486	20.00 ea	39.25 /mh	236	6.00 /ea	120		/ea			356	461
	Expansion Anchor 1/2 x 5-1/4in SS 304	5001.073	50.00 ea	39.25 /mh	98	10.00 /ea	500		/ea			598	642
	PS Hex Nut SS 3/8	15060.354	50.00 ea	39.25 /mh	98	0.17 /ea	9		/ea			107	151
	PS Washer Flat 3/8 SS	15060.576	50.00 ea	39.25 /mh	49	0.50 /ea	25		/ea			74	96
	Insulation Subcontractor 70' 3/4	15403.100	1.00 ls	/ls		/ls			/ls				
	heat trace Sub 2 at 50'	16000.001	1.00 ls	/ls		/ls			/ls				
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	Tracer Wire	2333.080	140.00 lf	39.25 /mh	55	1.52 /lf	234		/lf			289	314
	Tracer Wire Riser Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Warning Tape Detectable	2333.080	140.00 lf	39.25 /mh	55	0.12 /lf	17		/lf			72	96
	EQ Equipmeny room side CST SCH 80 PVC Per Curt		120.00 lf		5,091		3,710			5,060	1,660	15,521	17,812
	02610- EQ pump station site temp CST Per Curt Sch 80 PVC												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 0- 4'	2333.010	80.00 lf	39.25 /mh	251	/lf			/lf			251	364
	Trench Backfill 0- 4'	2333.020	80.00 lf	39.25 /mh	314	/lf			/lf			314	455
	Utility Bedding Peastone	2305.200	11.85 bcy	/cy		30.00 /ton	569		/cy			569	569
	Spoils to Waste	2333.060	11.85 cy	39.25 /mh	47	/cy			/cy			47	67
	PVC Sch-80 Pipe 3/4 Bell End	2336.110	400.00 lf	39.25 /mh	1,570	2.00 /lf	800		/lf			2,370	3,077
	PVC Sch 80 90 ell 3/4 SOC	2336.120	20.00 ea	39.25 /mh	94	3.00 /ea	60		/ea			154	197
	PVC Sch-80 45 Bend 3/4 SOC	2336.120	20.00 ea	39.25 /mh	94	6.00 /ea	120		/ea			214	257
	PVC Sch 80 Tee 3/4 SOC	2336.160	3.00 ea	39.25 /mh	4	6.00 /ea	18		/ea			22	23
	PVC Sch 80 Coupling 3/4" SOC	2336.180	30.00 ea	39.25 /mh	141	5.00 /ea	150		/ea			291	355
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	331	126	457	457
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	259	108	367	367
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	90	22	112	112
	Mikasa Jumping Jack Compactor (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			400.00 /Mnth	7	2	9	9
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	59	9	68	68
	CPVC Valve Ball True Union EPDM 3/4"	15211.520	3.00 ea	39.25 /mh	25	109.00 /ea	327		/ea			352	363
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt			50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PS Pipe Strut Clamp SS 3/4in	15060.486	40.00 ea	39.25 /mh	471	6.00 /ea	240		/ea			711	923
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS Expansion Anchor 3/8 x 5 1/2"i SS	15060.127	50.00 ea	39.25 /mh	98	10.00 /ea	500		/ea			598	642
	PS Hex Nut SS 3/8	15060.354	50.00 ea	39.25 /mh	98	0.17 /ea	9		/ea			107	151
	PS Washer Flat 3/8 SS	15060.576	50.00 ea	39.25 /mh	49	0.50 /ea	25		/ea			74	96
	Heat trace Subcontractor 3- runs at 100'	15403.100	1.00 ls	/ls		/ls			/ls				
	Insulation Subcontractor 220 3/4"	15403.100	1.00 ls	/ls		/ls			/ls				
	Core Drilled Hole - 2-8"	15122.100	3.00 ea	39.25 /mh	118	1.00 /ea	3	300	/ea			421	474
	Tracer Wire	2333.080	80.00 lf	39.25 /mh	31	1.52 /lf	134		/lf			165	179
	Tracer Wire Riser Box	2333.080	6.00 ea	39.25 /mh	236	95.00 /ea	570		/ea			806	911
	Warning Tape Detectable	2333.080	80.00 lf	39.25 /mh	31	0.12 /lf	10		/lf			41	55
	Grout pipe 8in	15124.300	3.00 ea	39.25 /mh	29	10.00 /ea	30		/ea			59	73
	EQ pump station site temp CST Per Curt Sch 80 PVC		80.00 lf		4,565		4,136	300		796	266	10,063	12,118
	PIPE Pipe				9,656		7,846	300		5,856	1,926	25,584	29,929
	24 - EQPS EQ Pump Station				9,656		7,846	300		5,856	1,926	25,584	29,929
	27 - ODOR Odor Control												
	PIPE Pipe												
	150-55 80 NPW to odor panel 27M03 SCH 80 PVC												
	PVC Sch 80 PIPE 2" PE	15211.203	20.00 lf	39.25 /mh	165	9.00 /lf	180		/lf			345	419
	PVC Sch 80 90 EL 2" S	15211.207	4.00 ea	39.25 /mh	33	7.00 /ea	28		/ea			61	76
	PVC Sch 80 Straight CPLG 2" S	15211.204	1.00 ea	39.25 /mh	8	14.00 /ea	14		/ea			22	26
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	3.00 ea	39.25 /mh	25	19.00 /ea	57		/ea			82	93
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt			50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PVC Sch 80 EPDM UNION 2" S	15211.219	1.00 ea	39.25 /mh	8	30.00 /ea	30		/ea			38	42
	PVC Sch 80 NIPPLE 2" X 3" MLD	15211.236	1.00 ea	39.25 /mh	8	5.00 /ea	5		/ea			13	17
	PVC Valve Ball True Union EPDM 2" S & T	15211.320	1.00 ea	39.25 /mh	8	287.00 /ea	287		/ea			295	299
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-55 80 NPW to odor panel 27M03 SCH 80 PVC												
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS 2 Piece Clamp SS 2in	15060.518	8.00 ea	39.25 /mh	94	12.00 /ea	96		/ea			190	233
	PS Expansion Anchor 1/2 x 7in SS	15060.127	16.00 ea	39.25 /mh	31	12.00 /ea	192		/ea			223	238
	Backflow Preventer 2" threaded	15403.130	1.00 ea	39.25 /mh	314	1,324.00 /ea	1,324		/ea			1,638	1,779
	PS Hex Nut SS 1/2	15060.354	16.00 ea	39.25 /mh	47	0.50 /ea	8		/ea			55	76
	PS Washer Flat 1/2 SS	15060.576	16.00 ea	39.25 /mh	157	0.50 /ea	8		/ea			165	236
	NPW to odor panel 27M03 SCH 80 PVC		20.00 lf		1,182		2,983					4,165	4,697
	150-55 80 Potable water to Odor control control panel 27M03 SCH 80 PVC												
	PVC Sch 80 PIPE 2" PE	15211.203	20.00 lf	39.25 /mh	165	9.00 /lf	180		/lf			345	419
	PVC Sch 80 90 EL 2" S	15211.207	4.00 ea	39.25 /mh	33	7.00 /ea	28		/ea			61	76
	PVC Sch 80 Straight CPLG 2" S	15211.204	1.00 ea	39.25 /mh	8	14.00 /ea	14		/ea			22	26
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	3.00 ea	39.25 /mh	25	19.00 /ea	57		/ea			82	93
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt			50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		48.00 /qt	53		/qt			53	53
	PVC Sch 80 EPDM UNION 2" S	15211.219	1.00 ea	39.25 /mh	8	30.00 /ea	30		/ea			38	42
	PVC Sch 80 NIPPLE 2" X 3" MLD	15211.236	1.00 ea	39.25 /mh	8	5.00 /ea	5		/ea			13	17
	PVC Valve Ball True Union EPDM 2" S & T	15211.320	1.00 ea	39.25 /mh	8	287.00 /ea	287		/ea			295	299
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS Strut Post Base SS	15060.478	4.00 ea	39.25 /mh	47	58.00 /ea	232		/ea			279	300
	PS 2 Piece Clamp SS 2in	15060.518	8.00 ea	39.25 /mh	94	12.00 /ea	96		/ea			190	233
	PS Expansion Anchor 1/2 x 7in SS	15060.127	16.00 ea	39.25 /mh	31	12.00 /ea	192		/ea			223	238
	Backflow Preventer 2" Threaded	15403.130	1.00 ea	39.25 /mh	314	1,324.00 /ea	1,324		/ea			1,638	1,779
	PS Hex Nut SS 1/2	15060.354	16.00 ea	39.25 /mh	47	0.50 /ea	8		/ea			55	76
	PS Washer Flat 1/2 SS	15060.576	16.00 ea	39.25 /mh	157	0.50 /ea	8		/ea			165	236
	Potable water to Odor control control panel 27M03 SCH 80 PVC		20.00 lf		1,182		2,983					4,165	4,697
	PIPE Pipe				2,364		5,967					8,330	9,394
	27 - ODOR Odor Control				2,364		5,967					8,330	9,394
	36 - SC 3&4 Secondary Clarifiers #3 and #4												
	PIPE Pipe												
	150-55 80 Secondary clarifier #3 Non Potable water 36M03 SCH 80 PVC												
	PVC Sch 80 PIPE 1" PE	15211.203	80.00 lf	39.25 /mh	659	2.00 /lf	160		/lf			819	1,116
	PVC Sch 80 90 EL 1" S	15211.207	12.00 ea	39.25 /mh	99	4.00 /ea	48		/ea			147	191
	PVC Sch 80 TEE 1"	15211.211	1.00 ea	39.25 /mh	8	7.00 /ea	7		/ea			15	19
	PVC Sch 80 Straight CPLG 1" S	15211.204	5.00 ea	39.25 /mh	41	5.00 /ea	25		/ea			66	85
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	1.00 ea	39.25 /mh	8	8.00 /ea	8		/ea			16	20
	PVC Sch 80 CAP 1" S	15211.228	1.00 ea	39.25 /mh	8	7.00 /ea	7		/ea			15	19
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt			99	99
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		48.00 /qt	106		/qt			106	106
	PVC Sch 80 TEE 1" x 1/2 tScoket x threaded tee	15211.250	20.00 ea	39.25 /mh	165	6.00 /ea	120		/ea			285	359
	PVC Valve Ball True Union Viton 1" S & T	15211.310	1.00 ea	39.25 /mh	8	126.00 /ea	126		/ea			134	138
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS 2 Piece Clamp SS 1in	15060.518	20.00 ea	39.25 /mh	236	6.00 /ea	120		/ea			356	461
	PS Expansion Anchor 3/8 x 2-1/4in SS	15060.127	40.00 ea	39.25 /mh	79	5.00 /ea	200		/ea			279	314
	SS sprayer nozzles	15212.520	20.00 ea	39.25 /mh	165	75.00 /ea	1,500		/ea			1,665	1,739
	Male Hose x Female Quick Disconnect	15112.280	1.00 ea	39.25 /mh	20	28.00 /ea	28		/ea			48	56
	Secondary clarifier #3 Non Potable water 36M03 SCH 80 PVC		80.00 lf		1,731		2,974					4,705	5,484
	150-55 80 Secondary clarifier #4 Non potable water 36M03 SCH 80 PVC												
	PVC Sch 80 PIPE 1" PE	15211.203	80.00 lf	39.25 /mh	659	2.00 /lf	160		/lf			819	1,116
	PVC Sch 80 90 EL 1" S	15211.207	12.00 ea	39.25 /mh	99	4.00 /ea	48		/ea			147	191
	PVC Sch 80 TEE 1" S	15211.211	1.00 ea	39.25 /mh	8	7.00 /ea	7		/ea			15	19
	PVC Sch 80 Straight CPLG 1" S	15211.204	5.00 ea	39.25 /mh	41	5.00 /ea	25		/ea			66	85
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	1.00 ea	39.25 /mh	8	8.00 /ea	8		/ea			16	20
	PVC Sch 80 CAP 1" S	15211.228	1.00 ea	39.25 /mh	8	7.00 /ea	7		/ea			15	19
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt			99	99
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		48.00 /qt	106		/qt			106	106
	PVC Sch 80 Reducing TEE 1" x 1/2 soc x thread	15211.212	20.00 ea	39.25 /mh	165	6.00 /ea	120		/ea			285	359
	PVC Valve Ball True Union Viton 1" S & T	15211.310	1.00 ea	39.25 /mh	8	126.00 /ea	126		/ea			134	138
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	39.25 /mh	236	21.00 /lf	420		/lf			656	761
	PS 2 Piece Clamp SS 1in	15060.518	20.00 ea	39.25 /mh	236	6.00 /ea	120		/ea			356	461
	PS Expansion Anchor 1/2 x 2-3/4in SS	15060.127	40.00 ea	39.25 /mh	79	4.00 /ea	160		/ea			239	274
	SS sprayer nozzle 1/2"	15212.520	20.00 ea	39.25 /mh	165	75.00 /ea	1,500		/ea			1,665	1,739
	Male Hose x Female Quick Disconnect	15112.280	1.00 ea	39.25 /mh	20	28.00 /ea	28		/ea			48	56
	Secondary clarifier #4 Non potable water 36M03 SCH 80 PVC		80.00 lf		1,731		2,934					4,665	5,444
	PIPE Pipe				3,463		5,907					9,370	10,928
	36 - SC 3&4 Secondary Clarifiers #3 and #4				3,463		5,907					9,370	10,928
	400531.14 PVC Pipe: Pressure				80,869		276,967	600		34,304	11,357	404,098	440,489
400531.16	PVC Pipe: Gravity												
	00 - SITE Site												
	PIPE Pipe												
	026-1- modify existing SSFM manhole 00C25 detail D												
	Core Drilled Hole - 16 -8"	15122.100	1.00 ea	39.25 /mh	157	1.00 /ea	1	800	/ea			958	1,029
	Link Seal Size LS-360-S	15123.100	41.00 ea	39.25 /mh	241	25.00 /ea	1,025		/ea			1,266	1,375
	Sub-spectasheild lining of existing manhole (moltz demo included)	9960.100	1.00 ls	39.25 /mh	1,413	/ls		8,500	/mh			9,913	10,549
	Grout Pipe in Manhole 16"	2327.090	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	modify existing SSFM manhole 00C25 detail D				1,890		1,076	9,300				12,266	13,116
	02605- SSFM C-900 DR18 00C22 00C21												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 8-10'	2333.010	291.00 lf	39.25 /mh	2,855	/lf			/lf			2,855	4,140
	Trench Backfill 8-10'	2333.020	291.00 lf	39.25 /mh	3,427	/lf			/lf			3,427	4,968
	Utility Bedding Peastone	2305.200	166.68 bcy	/cy		30.00 /ton	8,001		/cy			8,001	8,001
	Spoils to Waste	2333.060	172.44 cy	39.25 /mh	677	/cy			/cy			677	981
	Trench Wrap at joints	2333.040	1.00 LF	39.25 /mh	1	1.00 /LF	1		/LF			2	2
	PVC C-900 Pipe 14	2336.310	292.00 lf	39.25 /mh	1,719	57.00 /lf	17,476		/lf			19,195	19,969
	PVC C-900 90 ell 14	2336.320	3.00 ea	39.25 /mh	236	1,353.00 /ea	4,059		/ea			4,295	4,400
	PVC C-900 45 bend 14	2336.320	2.00 ea	39.25 /mh	157	1,018.00 /ea	2,036		/ea			2,193	2,264
	PVC C-900 Reducer 24 x 14 glass lined	2336.350	1.00 ea	39.25 /mh	157	4,073.00 /ea	4,073		/ea			4,230	4,301
	PVC C-900 Reducer 24 x 20	2336.350	1.00 ea	39.25 /mh	157	2,426.00 /ea	2,426		/ea			2,583	2,654
	PVC C-900 Caps 14	2336.330	1.00 ea	39.25 /mh	79	507.00 /ea	507		/ea			586	621
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.35 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,220	1,225	4,445	4,445
	John Deere 624 Loader (172 HP) (M)	1900.132	0.35 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	2,520	1,050	3,570	3,570
	Water Truck, 4,000 Gallon (L)	1900.210	0.35 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,750	420	2,170	2,170
	Mikasa Jumping Jack Compactor (L)	1900.138	0.35 Mnth	/Mnth		/Mnth			400.00 /Mnth	140	35	175	175
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.35 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	1,138	175	1,313	1,313
	Warning Tape Detectable	2333.080	320.00 lf	39.25 /mh	126	0.12 /lf	38		/lf			164	221
	Tracer Wire	2333.080	320.00 lf	39.25 /mh	126	1.52 /lf	535		/lf			661	717
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	PVC C-900 Caps 24	2336.330	1.00 ea	39.25 /mh	157	1,491.00 /ea	1,491		/ea			1,648	1,719
	DI MEGALUG for PVC 14"	2511.612	12.00 ea	39.25 /mh		309.00 /ea	3,708		/ea			3,708	3,708
	DI MEGALUG for PVC 24"	2511.612	6.00 ea	39.25 /mh		658.00 /ea	3,948		/ea			3,948	3,948
	Tie to Existing SSFM	2333.010	1.00 ea	39.25 /mh	628	50.00 /ea	50		/ea			678	961
	Tie in Exist Manhole 18"-up	2327.100	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Place Concrete Fill existing SSFM	3310.230	2.00 cy	39.25 /mh	336	180.00 /cy	385		/cy			721	872
	14 Bell Restrainer F/C900	2336.380	16.00 ea	39.25 /mh	1,256	394.00 /ea	6,304		/ea			7,560	8,125
	Trenton wax tape, 6" x 9' Roll	2333.100	5.00 ea	39.25 /mh	1,570	57.00 /ea	285		/ea			1,855	2,562
	Poly Wrap for restraints	7260.100	96.00 LF	39.25 /mh	8	4.90 /LF	503		/LF			511	514
	Poly Tape	2333.090	2.00 roll	/roll		8.00 /roll	18		/roll			18	18
	Flow Fill at pipe crossings	3310.100	2.00 cy	/cy		180.00 /cy	378		/cy			378	378
	DI MJ Compact Solid Sleeve Long 14	2511.322	1.00 ea	39.25 /mh	79	958.00 /ea	958		/ea			1,037	1,072
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	2.00 ea	39.25 /mh		80.00 /ea	160		/ea			160	160
	SSFM C-900 DR18 00C22 00C21		291.00 lf		15,318		57,581			8,818	2,905	84,621	91,514
	02605-1 Trench & Pipe C90024" PE from EQ Pump to Clarifier #2 C900 DR25												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 6- 8'	2333.010	42.00 lf	39.25 /mh	495	/lf			/lf			495	717
	Trench Backfill 6- 8'	2333.020	42.00 lf	39.25 /mh	824	/lf			/lf			824	1,195
	Utility Bedding Peastone	2305.200	22.45 bcy	/cy		30.00 /ton	1,077		/cy			1,077	1,077
	Spoils to Waste	2333.060	24.89 cy	39.25 /mh	98	/cy			/cy			98	142
	PVC C-900 Pipe 24	2336.310	42.00 lf	39.25 /mh	412	120.00 /lf	5,292		/lf			5,704	5,890
	DI MJ Compact Cap 24	2511.310	2.00 ea	39.25 /mh	471	1,491.00 /ea	2,982		/ea			3,453	3,665
	DI MJ Compact Solid Sleeve Long 24	2511.322	2.00 ea	39.25 /mh	471	2,042.00 /ea	4,084		/ea			4,555	4,767
	Polybag 24" and smaller	2333.090	42.00 lf	39.25 /mh	16	5.40 /lf	249		/lf			266	273
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,800	750	2,550	2,550
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,250	300	1,550	1,550
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	813	125	938	938
	Cross Existing	2333.010	1.00 ea	39.25 /mh	157	500.00 /ea	500		/ea			657	728
	Support Existing	2333.010	1.00 ea	39.25 /mh	157	50.00 /ea	50		/ea			207	278
	Warning Tape Detectable	2333.080	80.00 lf	39.25 /mh	31	0.12 /lf	10		/lf			41	55
	Tracer Wire	2333.080	80.00 lf	39.25 /mh	314	1.52 /lf	134		/lf			448	589
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	DI MEGALUG for PVC 24"	2511.612	7.00 ea	39.25 /mh		658.00 /ea	4,606		/ea			4,606	4,606
	DI Wall Pipe FLG x MJ w/ Collar & Tapped Holes 24in x 2ft 6in long	15221.376	1.00 ea	39.25 /mh	628	4,541.00 /ea	4,541		/ea			5,169	5,452
	Trenton wax tape, 6" x 9' Roll	2333.100	6.00 ea	39.25 /mh	942	57.00 /ea	342		/ea			1,284	1,708
	24 Bell Restrainer F/C900	2336.380	3.00 ea	39.25 /mh	353	1,035.00 /ea	3,105		/ea			3,458	3,617
	Poly Wrap for restraints	7260.100	19.00 sf	39.25 /mh	1	4.90 /sf	100		/sf			101	102
	Poly Tape	2333.090	1.00 roll	/roll		8.00 /roll	9		/roll			9	9
	Flow Fill at pipe crossings	3310.100	1.00 LF	/LF		180.00 /LF	189		/LF			189	189
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	2.00 ea	39.25 /mh		80.00 /ea	160		/ea			160	160
	Trench & Pipe C90024" PE from EQ Pump to Clarifier #2 C900 DR25		42.00 lf		6,313		27,670			6,313	2,075	42,370	45,211
	02605-1 36" PE from existing 42" to valve vaultand #4 00C21/00C22 C900 Dr25												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 10-12'	2333.010	500.00 lf	39.25 /mh	5,888	/lf			/lf			5,888	8,537

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02605-1 36" PE from existing 42" to valve vaultand #4 00C21/00C22 C900 Dr25												
	Trench Backfill 10-12'	2333.020	500.00 lf	39.25 /mh	7,850	/lf			/lf			7,850	11,383
	Trench Box 12' Deep	2333.030	500.00 lf	/lf		/lf			50.00 /lf	25,000		25,000	25,000
	Utility Bedding Peastone	2305.200	462.00 bcy	/cy		30.00 /ton	22,176		/cy			22,176	22,176
	Spoils to Waste	2333.060	462.96 cy	39.25 /mh	1,817	/cy			/cy			1,817	2,635
	DI MJ Std Wgt 90 36	2511.214	1.00 ea	39.25 /mh	471	10,482.00 /ea	10,482		/ea			10,953	11,165
	DI MJ Std Wgt 45 36	2511.214	4.00 ea	39.25 /mh	1,884	7,547.00 /ea	30,188		/ea			32,072	32,920
	DI MJ Std Wgt Tee 36x16	2511.224	1.00 ea	39.25 /mh	628	8,476.00 /ea	8,476		/ea			9,104	9,387
	DI MJ Std Wgt Tee 42x36	2511.224	1.00 ea	39.25 /mh	628	22,375.00 /ea	22,375		/ea			23,003	23,286
	DI MJ Std Wgt Cap 36	2511.210	2.00 ea	39.25 /mh	628	5,236.00 /ea	10,472		/ea			11,100	11,383
	DI MJ Std Wgt Solid Sleeve Long 36	2511.222	2.00 ea	39.25 /mh	1,256	5,699.00 /ea	11,398		/ea			12,654	13,219
	DI MJ Std Wgt Solid Sleeve Long 42	2511.222	2.00 ea	39.25 /mh	1,256	8,587.00 /ea	17,174		/ea			18,430	18,995
	DI MEGALUG for PVC 16"	2511.612	1.00 ea	39.25 /mh		394.00 /ea	394		/ea			394	394
	Polybag 36" and smaller	2333.090	982.00 lf	39.25 /mh	385	5.40 /lf	5,833		/lf			6,219	6,392
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	11,500	4,375	15,875	15,875
	John Deere 624 Loader (172 HP) (M)	1900.132	1.25 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	9,000	3,750	12,750	12,750
	Water Truck, 4,000 Gallon (L)	1900.210	1.25 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	6,250	1,500	7,750	7,750
	Mikasa Jumping Jack Compactor (L)	1900.138	1.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	500	125	625	625
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.25 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	4,063	625	4,688	4,688
	Tie to Existing 42"	2333.010	1.00 ea	39.25 /mh	6,280	50.00 /ea	50		/ea			6,330	9,156
	Warning Tape Detectable	2333.080	500.00 lf	39.25 /mh	196	0.12 /lf	60		/lf			256	345
	Tracer Wire	2333.080	500.00 lf	39.25 /mh	196	1.52 /lf	836		/lf			1,032	1,121
	Tracer Wire Test Box	2333.080	5.00 ea	39.25 /mh	785	95.00 /ea	475		/ea			1,260	1,613
	DI MEGALUG for PVC 36"	2511.612	20.00 ea	39.25 /mh		1,961.00 /ea	39,220		/ea			39,220	39,220
	DI MEGALUG for PVC 42"	2511.612	6.00 ea	39.25 /mh		4,000.00 /ea	24,000		/ea			24,000	24,000
	36" Bell Restrainer F/C900	2336.380	29.00 ea	39.25 /mh	4,553	1,275.00 /ea	36,975		/ea			41,528	43,577
	42" Bell Restrainer F/C900	2336.380	1.00 ea	39.25 /mh	314	4,000.00 /ea	4,000		/ea			4,314	4,455
	DI Wall Pipe FLG x MJ 36in x 1ft 6in long	15221.308	1.00 ea	39.25 /mh	942	9,486.00 /ea	9,486		/ea			10,428	10,852
	Trenton outer-wrap, 6" x 50' Roll	2333.100	28.00 ea	39.25 /mh	4,396	285.00 /ea	7,980		/ea			12,376	14,364
	Poly Wrap for restraints	7260.100	265.00 sf	39.25 /mh	21	4.90 /sf	1,389		/sf			1,410	1,420
	Poly Tape	2333.090	6.00 roll	/roll		8.00 /roll	53		/roll			53	53
	Flow Fill at pipe crossings	3310.100	20.00 cy	/cy		180.00 /cy	3,780		/cy			3,780	3,780
	Polybag 48" and smaller	2333.090	1,018.00 lf	39.25 /mh	400	7.00 /lf	7,839		/lf			8,238	8,418
	PVC C-900 Pipe 36	2336.310	485.00 lf	39.25 /mh	5,330	197.00 /lf	100,322		/lf			105,652	108,051
	PVC C-900 Pipe 42	2336.310	18.00 lf	39.25 /mh	212	371.00 /lf	7,012		/lf			7,224	7,319
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	20.00 ea	39.25 /mh		80.00 /ea	1,600		/ea			1,600	1,600
	36" PE from existing 42" to valve vaultand #4 00C21/00C22 C900 Dr25		500.00 lf		46,944		384,095			56,363	10,375	497,777	518,901
	02605-1 16"&12" PE from 36" to valve vault & Eq basin 00C22 C900 DR25												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 6- 8'	2333.010	218.00 lf	39.25 /mh	1,711	/lf			/lf			1,711	2,481
	Trench Backfill 6- 8'	2333.020	218.00 lf	39.25 /mh	2,139	/lf			/lf			2,139	3,102
	Utility Bedding Peastone	2305.200	125.48 bcy	/cy		30.00 /ton	6,023		/cy			6,023	6,023
	Spoils to Waste	2333.060	129.19 cy	39.25 /mh	507	/cy			/cy			507	735
	PVC C-900 Pipe 12	2336.310	116.00 lf	39.25 /mh	546	49.00 /lf	5,968		/lf			6,515	6,760
	PVC C-900 Pipe 14	2336.310	102.00 lf	39.25 /mh	601	57.00 /lf	6,105		/lf			6,705	6,975
	DI MJ Std Wgt 90 12	2511.214	5.00 ea	39.25 /mh	393	718.00 /ea	3,590		/ea			3,983	4,159
	DI MJ Std Wgt 90 14	2511.214	2.00 ea	39.25 /mh	236	1,353.00 /ea	2,706		/ea			2,942	3,047
	DI MJ Std Wgt Tee 14	2511.224	2.00 ea	39.25 /mh	236	1,808.00 /ea	3,616		/ea			3,852	3,957
	DI MJ Std Wgt Tee 14x12	2511.224	1.00 ea	39.25 /mh	118	1,840.00 /ea	1,840		/ea			1,958	2,011
	DI MJ Std Wgt Red 14x12	2511.220	1.00 ea	39.25 /mh	118	648.00 /ea	648		/ea			766	819
	DI MJ Compact Solid Sleeve Long 12	2511.322	2.00 ea	39.25 /mh	236	532.00 /ea	1,064		/ea			1,300	1,405
	DI MJ Compact Solid Sleeve Long 14	2511.322	4.00 ea	39.25 /mh	471	958.00 /ea	3,832		/ea			4,303	4,515
	DI MEGALUG for PVC 12"	2511.612	18.00 ea	39.25 /mh		223.00 /ea	4,014		/ea			4,014	4,014
	DI MEGALUG for PVC 14"	2511.612	22.00 ea	39.25 /mh		309.00 /ea	6,798		/ea			6,798	6,798
	Polybag 12" and Smaller	2333.090	218.00 lf	39.25 /mh	86	2.50 /lf	600		/lf			685	724
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,760	1,050	3,810	3,810
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	2,160	900	3,060	3,060
	Water Truck, 4,000 Gallon (L)	1900.210	0.30 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	1,500	360	1,860	1,860
	Mikasa Jumping Jack Compactor (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			400.00 /Mnth	120	30	150	150
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	975	150	1,125	1,125
	Warning Tape Detectable	2333.080	240.00 lf	39.25 /mh	94	0.12 /lf	29		/lf			123	165
	Tracer Wire	2333.080	240.00 lf	39.25 /mh	94	1.52 /lf	401		/lf			495	538
	Tracer Wire Test Box	2333.080	6.00 ea	39.25 /mh	942	95.00 /ea	570		/ea			1,512	1,936
	14 Bell Restrainer F/C900	2336.380	6.00 ea	39.25 /mh	471	394.00 /ea	2,364		/ea			2,835	3,047
	16 Bell Restrainer F/C900	2336.380	6.00 ea	39.25 /mh	471	463.00 /ea	2,778		/ea			3,249	3,461
	DI Wall Pipe FLG x MJ w/ Collar & Tapped Holes 12in x 2ft 0in long	15221.376	2.00 ea	39.25 /mh	628	1,495.00 /ea	2,990		/ea			3,618	3,901
	Trenton outer-wrap, 6" x 50' Roll	2333.100	3.00 ea	39.25 /mh	942	285.00 /ea	855		/ea			1,797	2,221
	Poly Wrap for restraints	7260.100	45.00 sf	39.25 /mh	4	4.90 /sf	236		/sf			239	241
	Trenton Primer for Wax Tape (1 gallon can)	2333.100	3.00 ea	39.25 /mh		80.00 /ea	240		/ea			240	240

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02605-1 16"&12" PE from 36" to valve vault & Eq basin 00C22 C900 DR25												
	Poly Tape	2333.090	2.00 roll	/roll		8.00 /roll	18		/roll			18	18
	16"&12" PE from 36" to valve vault & Eq basin 00C22 C900 DR25		218.00 lf		11,669		57,334			7,565	2,490	79,058	84,310
	PIPE Pipe				82,135		527,755	9,300		79,058	17,845	716,092	753,053
	00 - SITE Site				82,135		527,755	9,300		79,058	17,845	716,092	753,053
	24 - EQPS EQ Pump Station												
	PIPE Pipe												
	150-55 80 EQ Pump station CST lines 24M01 SCH 80 PVC												
	PVC Sch 80 PIPE 3/4" PE	15211.203	200.00 lf	39.25 /mh	1,806	1.30 /lf	260		/lf			2,066	2,878
	PVC Sch 80 90 EL 3/4" S	15211.207	12.00 ea	39.25 /mh	99	3.00 /ea	36		/ea			135	179
	PVC Sch 80 45 EL 3/4" SOCxSOC	15211.208	6.00 ea	39.25 /mh	49	6.00 /ea	36		/ea			85	108
	PVC Sch 80 TEE 3/4" S	15211.211	3.00 ea	39.25 /mh	25	6.00 /ea	18		/ea			43	54
	PVC Sch 80 Straight CPLG 3/4" S	15211.204	13.00 ea	39.25 /mh	107	5.00 /ea	65		/ea			172	220
	PVC Sch 80 CAP 3/4" S	15211.228	6.00 ea	39.25 /mh	49	4.00 /ea	24		/ea			73	96
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt			99	99
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		48.00 /qt	106		/qt			106	106
	PS Strut SS 1-5/8 x 1-5/8	15060.476	60.00 lf	39.25 /mh	707	21.00 /lf	1,260		/lf			1,967	2,284
	PS 2 Piece Clamp SS 3/4 in	15060.518	60.00 ea	39.25 /mh	707	6.00 /ea	360		/ea			1,067	1,384
	PS Expansion Anchor 3/4 x 6-1/4in SS	15060.127	120.00 ea	39.25 /mh	236	15.00 /ea	1,800		/ea			2,036	2,141
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls				
	PS Special Support for 3/4 sch 80 pvc MP218 ?	15060.475	20.00 ea	39.25 /mh	785	0.01 /ea	0		/ea			785	1,138
	Sleeve Plastic CS-3-	15121.600	6.00 ea	39.25 /mh	471	86.00 /ea	516		/ea			987	1,199
	Link Seal Size LS-315-S	15123.100	48.00 ea	39.25 /mh	283	13.00 /ea	624		/ea			907	1,034
	Core Drilled Hole - 3 -"18 ? drill into exist headworks	15122.100	3.00 ea	39.25 /mh	118	1.00 /ea	3	300	/ea			421	474
	Grout Sleeve 3in	15124.300	6.00 ea	39.25 /mh	236	5.00 /ea	30		/ea			266	371
	EQ Pump station CST lines 24M01 SCH 80 PVC		200.00 lf		5,676		5,237	300				11,212	13,766
	PIPE Pipe				5,676		5,237	300				11,212	13,766
	24 - EQPS EQ Pump Station				5,676		5,237	300				11,212	13,766
	400531.16 PVC Pipe: Gravity				87,810		532,992	9,600		79,058	17,845	727,305	766,819
400533.03	HDPE Pipe												
	00 - GEN General												
	PIPE Pipe												
	02616- Temp Potable water piping for tempary Job site trailers												
	Trench Excavtion 4- 6'	2333.010	600.00 lf	39.25 /mh	2,355	/lf			/lf			2,355	3,415
	Trench Backfill 4- 6'	2333.020	600.00 lf	39.25 /mh	3,533	/lf			/lf			3,533	5,122
	Utility Bedding Peastone	2305.200	88.89 bcy	/cy		30.00 /ton	4,267		/cy			4,267	4,267
	Spoils to Waste	2333.060	88.89 cy	39.25 /mh	349	/cy			/cy			349	506
	HD PE Pipe 2 DR 11	2631.301	600.00 lf	39.25 /mh	1,178	2.00 /lf	1,260		/lf			2,438	2,967
	HD PE 90 bend 2 DR 11	2631.314	12.00 ea	39.25 /mh	424	7.00 /ea	84		/ea			508	699
	HD PE 45 bend 2 DR 11	2631.314	6.00 ea	39.25 /mh	118	7.00 /ea	42		/ea			160	213
	HD PE Tee 2 DR 11	2631.320	3.00 ea	39.25 /mh	59	9.00 /ea	27		/ea			86	112
	HD PE Reducer 2"x 3/4" DR 11	2631.330	1.00 ea	39.25 /mh	49	15.00 /ea	15		/ea			64	86
	HD PE Pipe Cap 2 DR 11	2631.350	3.00 ea	39.25 /mh	106	3.00 /ea	9		/ea			115	163
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.27 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,512	956	3,467	3,467
	John Deere 624 Loader (172 HP) (M)	1900.132	0.27 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	1,966	819	2,785	2,785
	Water Truck, 4,000 Gallon (L)	1900.210	0.14 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	680	163	843	843
	Mikasa Jumping Jack Compactor (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			400.00 /Mnth	54	14	68	68
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	442	68	510	510
	Tie to Existing	2333.010	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Disinfection/Chlorination of PW (Enter Line Size)	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		/ea			364	505
	Valve - Plug MJ 2"	2519.160	4.00 ea	39.25 /mh	314	250.00 /ea	1,000		/ea			1,314	1,455
	Valve Box Assembly 6" Bury	2519.130	4.00 ea	39.25 /mh	471	263.00 /ea	1,052		/ea			1,523	1,735
	Valve Box 2' Extension	2519.130	4.00 ea	39.25 /mh	79	94.00 /ea	376		/ea			455	490
	Conc Block for Valve	2519.100	4.00 ea	39.25 /mh	79	50.00 /ea	200		/ea			279	314
	Conc Pad for Valve Box	2519.100	4.00 ea	39.25 /mh	314	50.00 /ea	200		/ea			514	655
	Valve Stem Extension	2519.100	4.00 ea	39.25 /mh	157	263.00 /ea	1,052		/ea			1,209	1,280
	Valve Position Indicator	2519.100	4.00 ea	39.25 /mh	157	1,325.00 /ea	5,300		/ea			5,457	5,528
	Valve - Marker Post	2519.100	4.00 ea	39.25 /mh	157	66.00 /ea	264		/ea			421	492
	Valve - Tee Wrench	2519.100	4.00 ea	39.25 /mh	79	0.00 /ea	0		/ea			79	114
	Water Tap Saddle 8 x 2"	2519.424	1.00 ea	39.25 /mh	24	250.00 /ea	250		/ea			274	284
	HDPE Pipe 3/4"	2631.201	20.00 lf	39.25 /mh	24	1.00 /lf	21		/lf			45	55
	Temp Potable water piping for tempary Job site trailers		600.00 lf		10,415		15,519			5,654	2,019	33,606	38,293
	PIPE Pipe				10,415		15,519			5,654	2,019	33,606	38,293
	00 - GEN General				10,415		15,519			5,654	2,019	33,606	38,293
	00 - SITE Site												
	PIPE Pipe												
	02610- 1" compressed air line to existing HPA HDPE SDR 11 00C22												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 0- 4'	2333.010	63.00 lf	39.25 /mh	198	/lf			/lf			198	287
	Trench Backfill 0- 4'	2333.020	63.00 lf	39.25 /mh	247	/lf			/lf			247	359

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02610- 1" compressed air line to existing HPA HDPE SDR 11 00C22												
	Utility Bedding Peastone	2305.200	9.33 bcy	/cy		30.00 /ton	448		/cy			448	448
	Spoils to Waste	2333.060	9.33 cy	39.25 /mh	37	/cy			/cy			37	53
	HDPE SDR 11 Pipe 1" (half for temp)	15212.005	126.00 lf	39.25 /mh	989	1.00 /lf	126		/lf			1,115	1,560
	HDPE SDR 11 90 Elbow 1" (half for temp)	15212.035	4.00 ea	39.25 /mh	31	7.00 /ea	28		/ea			59	74
	HDPE SDR 11 Tee 1"	15212.055	1.00 ea	39.25 /mh	8	14.00 /ea	14		/ea			22	25
	HDPE SDR 11 Coupling 1"	15212.025	4.00 ea	39.25 /mh	31	12.00 /ea	48		/ea			79	94
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	276	105	381	381
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	216	90	306	306
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	150	36	186	186
	Mikasa Jumping Jack Compactor (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			400.00 /Mnth	12	3	15	15
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	98	15	113	113
	Cross Existing	2333.010	1.00 ea	39.25 /mh	79	500.00 /ea	500		/ea			579	614
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Support Existing	2333.010	1.00 ea	39.25 /mh	39	50.00 /ea	50		/ea			89	107
	Warning Tape Detectable	2333.080	90.00 lf	39.25 /mh	35	0.12 /lf	11		/lf			46	62
	Tracer Wire	2333.080	90.00 lf	39.25 /mh	35	1.52 /lf	150		/lf			186	202
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Flow Fill at pipe crossings	3310.100	3.00 cy	/cy		180.00 /cy	567		/cy			567	567
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth		/Mnth			750.00 /Mnth	750		750	750
	1" compressed air line to existing HPA HDPE SDR 11 00C22		63.00 lf		2,672		2,282			1,552	249	6,754	7,957
	02616- 2" Npw from IRR to WSPSPS HDPE C901 SDR 11 00C22												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 4- 6'	2333.010	24.00 lf	39.25 /mh	94	/lf			/lf			94	137
	Trench Backfill 4- 6'	2333.020	24.00 lf	39.25 /mh	141	/lf			/lf			141	205
	Spoils to Waste	2333.060	0.35 cy	39.25 /mh	1	/cy			/cy			1	2
	HD PE Pipe 2 DR 17	2631.301	24.00 lf	39.25 /mh	47	2.00 /lf	50		/lf			98	119
	HD PE 90 bend 2 DR 17	2631.314	1.00 ea	39.25 /mh	35	7.00 /ea	7		/ea			42	58
	HD PE Tee 2 DR 17	2631.320	1.00 ea	39.25 /mh	20	9.00 /ea	9		/ea			29	37
	HD PE Pipe Cap 2 DR 17	2631.350	1.00 ea	39.25 /mh	35	3.00 /ea	3		/ea			38	54
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	101	39	140	140
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	79	33	112	112
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	25	6	31	31
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			400.00 /Mnth	2	1	3	3
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	16	3	19	19
	Pot Hole Existing	2333.010	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Cross Existing	2333.010	1.00 ea	39.25 /mh	79	500.00 /ea	500		/ea			579	614
	Tie to Existing 2-1/2" IRR	2333.010	1.00 ea	39.25 /mh	79	300.00 /ea	300		/ea			379	414
	Warning Tape Detectable	2333.080	30.00 lf	39.25 /mh	12	0.12 /lf	4		/lf			15	21
	Tracer Wire	2333.080	30.00 lf	39.25 /mh	12	1.52 /lf	50		/lf			62	67
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	HDPE Reducer 2 1/2" x 2"	2631.226	1.00 ea	39.25 /mh	20	72.00 /ea	72		/ea			92	100
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth		/Mnth			750.00 /Mnth	750		750	750
	Flow Fill at pipe crossings	3310.100	1.00 cy	/cy		180.00 /cy	189		/cy			189	189
	2" Npw from IRR to WSPSPS HDPE C901 SDR 11 00C22		24.00 lf		1,359		1,424			1,024	81	3,888	4,500
	02616- 1" NPW from WSPSPS to Clarfier #4 00C22 HDPE C901												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 4- 6'	2333.010	40.00 lf	39.25 /mh	157	/lf			/lf			157	228
	Trench Backfill 4- 6'	2333.020	40.00 lf	39.25 /mh	236	/lf			/lf			236	341
	Utility Bedding Peastone	2305.200	5.92 bcy	/cy		30.00 /ton	284		/cy			284	284
	Spoils to Waste	2333.060	5.93 cy	39.25 /mh	23	/cy			/cy			23	34
	HD PE Pipe 1 DR 17	2631.301	40.00 lf	39.25 /mh	79	1.00 /lf	42		/lf			121	156
	HD PE 90 bend 1 DR 17	2631.314	4.00 ea	39.25 /mh	141	7.00 /ea	28		/ea			169	233
	HD PE 45 bend 2 DR 17	2631.314	2.00 ea	39.25 /mh	63	24.00 /ea	48		/ea			111	139
	HD PE Pipe Cap 2 DR 17	2631.350	4.00 ea	39.25 /mh	141	3.00 /ea	12		/ea			153	217
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	140	508	508
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	288	120	408	408
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	200	48	248	248
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			400.00 /Mnth	16	4	20	20
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	130	20	150	150
	Warning Tape Detectable	2333.080	40.00 lf	39.25 /mh	16	0.12 /lf	5		/lf			21	28

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02616- 1" NPW from WSPSPS to Clarfier #4 00C22 HDPE C901												
	Tracer Wire	2333.080	40.00 lf	39.25 /mh	16	1.52 /lf	67		/lf			83	90
	Tracer Wire Test Box	2333.080	4.00 ea	39.25 /mh	628	95.00 /ea	380		/ea			1,008	1,291
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	0.25 Mnth	/Mnth		/Mnth			750.00 /Mnth	188		188	188
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls				
	Heat trace	16000.001	1.00 ls	/ls		/ls			/ls				
	1" NPW from WSPSPS to Clarfier #4 00C22 HDPE C901		40.00 lf		1,813		916			1,240	332	4,301	5,116
	02616- 2" NPW HDPE C901 SDR11 yard hydarnts at secondary clarifier #4 00C23												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 4- 6'	2333.010	20.00 lf	39.25 /mh	79	/lf			/lf			79	114
	Trench Backfill 4- 6'	2333.020	20.00 lf	39.25 /mh	118	/lf			/lf			118	171
	Utility Bedding Peastone	2305.200	6.67 bcy	/cy		30.00 /ton	320		/cy			320	320
	Spoils to Waste	2333.060	6.67 cy	39.25 /mh	26	/cy			/cy			26	38
	HD PE Pipe 1 DR 17	2631.301	20.00 lf	39.25 /mh	39	1.00 /lf	21		/lf			60	78
	HD PE 90 bend 1 DR 17	2631.314	1.00 ea	39.25 /mh	35	7.00 /ea	7		/ea			42	58
	HD PE 45 bend 2 DR 17	2631.314	1.00 ea	39.25 /mh	31	24.00 /ea	24		/ea			55	70
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	83	32	114	114
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	65	27	92	92
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	25	6	31	31
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			400.00 /Mnth	2	1	3	3
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	16	3	19	19
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	157	300.00 /ea	600		/ea			757	828
	Support Existing	2333.010	2.00 ea	39.25 /mh	79	50.00 /ea	100		/ea			179	214
	Warning Tape Detectable	2333.080	30.00 lf	39.25 /mh	12	0.12 /lf	4		/lf			15	21
	Tracer Wire	2333.080	30.00 lf	39.25 /mh	12	1.52 /lf	50		/lf			62	67
	Tracer Wire Test Box	2333.080	4.00 ea	39.25 /mh	628	95.00 /ea	380		/ea			1,008	1,291
	Valve Box Assembly 6" Bury	2519.130	2.00 ea	39.25 /mh	236	263.00 /ea	526		/ea			762	867
	Valve Box 2" Extension	2519.130	2.00 ea	39.25 /mh	157	94.00 /ea	188		/ea			345	416
	Conc Block for Valve	2519.100	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Conc Pad for Valve Box	2519.100	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Valve Stem Extension	2519.100	2.00 ea	39.25 /mh	79	263.00 /ea	526		/ea			605	640
	Valve Position Indicator	2519.100	2.00 ea	39.25 /mh	79	1,325.00 /ea	2,650		/ea			2,729	2,764
	Valve - Marker Post	2519.100	2.00 ea	39.25 /mh	79	66.00 /ea	132		/ea			211	246
	Valve - Tee Wrench	2519.100	2.00 ea	39.25 /mh	39	0.00 /ea	0		/ea			39	57
	Yard Hydrant	2510.200	2.00 ea	39.25 /mh	1,256	330.00 /ea	660		/ea			1,916	2,481
	misc fitting for hydrant connection	2333.010	2.00 ea	39.25 /mh	157	200.00 /ea	400		/ea			557	628
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth		/Mnth			750.00 /Mnth	750		750	750
	HDPE Valve - 1"	2519.160	2.00 ea	39.25 /mh	79	33.00 /ea	66		/ea			145	180
	2" NPW HDPE C901 SDR11 yard hydarnts at secondary clarifier #4 00C23		20.00 lf		4,002		6,904			991	68	11,964	13,765
	02616- HDPE C901 SDR11 potable water line to Liquid stream odor control 00C21												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		50.00 /ea	50		414	555
	Trench Excavtion 4- 6'	2333.010	110.00 lf	39.25 /mh	432	/lf			/lf			432	626
	Trench Backfill 4- 6'	2333.020	110.00 lf	39.25 /mh	648	/lf			/lf			648	939
	Utility Bedding Peastone	2305.200	16.25 bcy	/cy		30.00 /ton	780		/cy			780	780
	Spoils to Waste	2333.060	16.30 cy	39.25 /mh	64	/cy			/cy			64	93
	HD PE Pipe 2 DR 17	2631.301	110.00 lf	39.25 /mh	216	2.00 /lf	231		/lf			447	544
	HD PE 90 bend 2 DR 17	2631.314	4.00 ea	39.25 /mh	141	7.00 /ea	28		/ea			169	233
	HD PE 45 bend 2 DR 17	2631.314	1.00 ea	39.25 /mh	31	24.00 /ea	24		/ea			55	70
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	360	150	510	510
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	125	30	155	155
	Mikasa Jumping Jack Compactor (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			400.00 /Mnth	10	3	13	13
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	81	13	94	94
	Tie to Existing	2333.010	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Warning Tape Detectable	2333.080	130.00 lf	39.25 /mh	51	0.12 /lf	16		/lf			67	90
	Tracer Wire	2333.080	130.00 lf	39.25 /mh	51	1.52 /lf	217		/lf			268	291
	Tracer Wire Test Box	2333.080	2.00 ea	39.25 /mh	314	95.00 /ea	190		/ea			504	645
	Disinfection/Chlorination of PW 2"	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		/ea			678	961
	HDPE Valve - 2"	2519.160	1.00 ea	39.25 /mh	79	90.00 /ea	90		/ea			169	204
	Valve Box Assembly 6" Bury	2519.130	1.00 ea	39.25 /mh	118	263.00 /ea	263		/ea			381	434
	Valve Box 2" Extension	2519.130	1.00 ea	39.25 /mh	20	94.00 /ea	94		/ea			114	122
	Conc Block for Valve	2519.100	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Conc Pad for Valve Box	2519.100	1.00 ea	39.25 /mh	79	50.00 /ea	50		/ea			129	164
	Valve Stem Extension	2519.100	1.00 ea	39.25 /mh	39	263.00 /ea	263		/ea			302	320
	Valve Position Indicator	2519.100	1.00 ea	39.25 /mh	39	1,325.00 /ea	1,325		/ea			1,364	1,382
	Valve - Marker Post	2519.100	1.00 ea	39.25 /mh	39	66.00 /ea	66		/ea			105	123

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02616- HDPE C901 SDR11 potable water line to Liquid stream odor control 00C21												
	Valve - Tee Wrench	2519.100	1.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Water Tap Saddle 8 x 2"	2519.424	1.00 ea	39.25 /mh	79	250.00 /ea	250		/ea			329	364
	Tie to Existing	2333.010	1.00 ea	39.25 /mh	157	300.00 /ea	300		/ea			457	528
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth					750.00 /Mnth	750		750	750
	Flow Fill at pipe crossings	3310.100	1.00 cy	/cy		180.00 /cy	189		/cy			189	189
	HDPE C901 SDR11 potable water line to Liquid stream odor control 00C21		110.00 lf		3,695		4,576			1,836	370	10,477	12,139
	02616- 2" HDPE C901 SDR11 Potable water line relocte for 36" PE 00C21 & 00C22												
	Trench Excavtion 4- 6'	2333.010	246.00 lf	39.25 /mh	1,931	/lf			/lf			1,931	2,800
	Trench Backfill 4- 6'	2333.020	246.00 lf	39.25 /mh	2,414	/lf			/lf			2,414	3,500
	Utility Bedding Peastone	2305.200	36.35 bcy	/cy		30.00 /ton	1,745		/cy			1,745	1,745
	Spoils to Waste	2333.060	36.44 cy	39.25 /mh	143	/cy			/cy			143	207
	HD PE Pipe 2 DR 17	2631.301	246.00 lf	39.25 /mh	483	2.00 /lf	517		/lf			999	1,217
	HD PE Pipe Cap 2 DR 17	2631.350	4.00 ea	39.25 /mh	157	3.00 /ea	12		/ea			169	240
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.11 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,030	392	1,422	1,422
	John Deere 624 Loader (172 HP) (M)	1900.132	0.11 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	806	336	1,142	1,142
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	280	67	347	347
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			400.00 /Mnth	22	6	28	28
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	182	28	210	210
	Cut Existing	2333.010	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Tie to Existing	2333.010	2.00 ea	39.25 /mh	314	50.00 /ea	100		/ea			414	555
	Warning Tape Detectable	2333.080	260.00 lf	39.25 /mh	102	0.12 /lf	31		/lf			133	179
	Tracer Wire	2333.080	260.00 lf	39.25 /mh	102	1.52 /lf	435		/lf			537	583
	Tracer Wire Test Box	2333.080	3.00 ea	39.25 /mh	471	95.00 /ea	285		/ea			756	968
	Disinfection/Chlorination of PW 2"	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		/ea			678	961
	HDPE Valve - 2"	2519.160	2.00 ea	39.25 /mh	157	90.00 /ea	180		/ea			337	408
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	39.25 /mh	314	263.00 /ea	526		/ea			840	981
	Conc Block for Valve	2519.100	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Conc Pad for Valve Box	2519.100	2.00 ea	39.25 /mh	157	50.00 /ea	100		/ea			257	328
	Valve Stem Extension	2519.100	2.00 ea	39.25 /mh	79	263.00 /ea	526		/ea			605	640
	Valve Position Indicator	2519.100	2.00 ea	39.25 /mh	79	1,325.00 /ea	2,650		/ea			2,729	2,764
	Valve - Marker Post	2519.100	2.00 ea	39.25 /mh	79	66.00 /ea	132		/ea			211	246
	Valve - Tee Wrench	2519.100	1.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth		/Mnth			750.00 /Mnth	750		750	750
	Flow Fill at pipe crossings	3310.100	8.00 cy	/cy		180.00 /cy	1,512		/cy			1,512	1,512
	2" HDPE C901 SDR11 Potable water line relocte for 36" PE 00C21 & 00C22		246.00 lf		7,922		8,900			3,071	829	20,722	24,288
	02616- CA piping from WSPSPS to EQ basin And valve vault HDPE SDR 11 00C22												
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	39.25 /mh	628	50.00 /ea	50		50.00 /ea	50		728	1,011
	Trench Excavtion 4- 6'	2333.010	161.00 lf	39.25 /mh	1,264	/lf			/lf			1,264	1,833
	Trench Backfill 4- 6'	2333.020	161.00 lf	39.25 /mh	1,580	/lf			/lf			1,580	2,291
	Utility Bedding Peastone	2305.200	23.71 bcy	/cy		30.00 /ton	1,138		/cy			1,138	1,138
	Spoils to Waste	2333.060	23.85 cy	39.25 /mh	94	/cy			/cy			94	136
	HD PE Pipe 3 SDR 11	2631.301	151.00 lf	39.25 /mh	593	3.00 /lf	476		/lf			1,068	1,335
	HD PE Pipe 1 SDR 11	2631.301	10.00 lf	39.25 /mh	39	1.00 /lf	11		/lf			50	67
	HD PE 90 bend 3 SDR 11	2631.314	4.00 ea	39.25 /mh	471	13.00 /ea	52		/ea			523	735
	HD PE 45 bend 3 SDR 11	2631.314	2.00 ea	39.25 /mh	236	35.00 /ea	70		/ea			306	411
	HD PE Reducer 3" x 1" SDR 11	2631.330	1.00 ea	39.25 /mh	118	15.00 /ea	15		/ea			133	186
	HD PE Pipe Cap 2 SDR 11	2631.350	2.00 ea	39.25 /mh	236	3.00 /ea	6		/ea			242	347
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.07 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	681	259	940	940
	John Deere 624 Loader (172 HP) (M)	1900.132	0.07 Mnth	/Mnth		/Mnth			7,200.00 /Mnth	533	222	755	755
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			5,000.00 /Mnth	180	43	223	223
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			400.00 /Mnth	14	4	18	18
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			3,250.00 /Mnth	117	18	135	135
	Warning Tape Detectable	2333.080	171.00 lf	39.25 /mh	67	0.12 /lf	21		/lf			88	118
	Tracer Wire	2333.080	171.00 lf	39.25 /mh	67	1.52 /lf	286		/lf			353	383
	Tracer Wire Test Box	2333.080	4.00 ea	39.25 /mh	628	95.00 /ea	380		/ea			1,008	1,291
	Flow Fill at crossings	3310.100	8.00 cy	/cy		180.00 /cy	1,512		/cy			1,512	1,512
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	1.00 Mnth	/Mnth		/Mnth			750.00 /Mnth	750		750	750
	HDPE Male Adapter 3"	2631.214	1.00 ea	39.25 /mh	31	35.00 /ea	35		/ea			66	81
	HDPE Male adapter 1"	2631.214	1.00 ea	39.25 /mh	31	18.00 /ea	18		/ea			49	64
	CA piping from WSPSPS to EQ basin And valve vault HDPE SDR 11 00C22		161.00 lf		6,082		4,069			2,325	546	13,022	15,759
	PIPE Pipe				27,546		29,071			12,038	2,474	71,128	83,523
	00 - SITE Site				27,546		29,071			12,038	2,474	71,128	83,523
	33 - NA North Aeration												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	PIPE Pipe												
	02616- Storm HDPE corigated traffic rated add for lay down area per Jon												
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	39.25 /mh	1,256	50.00 /ea	100		50.00 /ea	100		1,456	2,021
	Trench Excavtion 0- 4'	2333.010	1,000.00 lf	39.25 /mh	3,140	/lf			/lf			3,140	4,553
	Trench Backfill 0- 4'	2333.020	1,000.00 lf	39.25 /mh	3,925	/lf			/lf			3,925	5,691
	Utility Bedding Peastone	2305.200	1,050.00 bcy	/cy		30.00 /ton	50,400		/cy			50,400	50,400
	HD PE Pipe 18 DR 17 rated for traffic	2631.301	114.00 lf	39.25 /mh	805	45.00 /lf	5,387		/lf			6,192	6,554
	HD PE Pipe 42 DR 17 rated for traffic	2631.301	886.00 lf	39.25 /mh	9,737	247.00 /lf	229,784		/lf			239,521	243,903
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.91 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	8,372	3,185	11,557	11,557
	John Deere 624 Loader (172 HP) (M)	1900.132	0.91 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	6,552	2,730	9,282	9,282
	Water Truck, 4,000 Gallon (L)	1900.210	0.45 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	2,270	545	2,815	2,815
	Mikasa Jumping Jack Compactor (L)	1900.138	0.45 Mnth	/Mnth		/Mn th			400.00 /Mnth	182	45	227	227
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.45 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	1,476	227	1,703	1,703
	Grout Pipe in Manhole 42"	2327.090	6.00 ea	39.25 /mh	1,413	150.00 /ea	900		/ea			2,313	2,949
	Grout Pipe in Manhole 18"	2327.090	1.00 ea	39.25 /mh	79	75.00 /ea	75		/ea			154	189
	Manhole CDOT rated traffic	2327.030	3.00 ea	39.25 /mh	3,768	0.00 /ea	0		/ea			3,768	5,464
	Manhole 6' Riser	2327.030	12.00 vf	39.25 /mh		0.00 /vf	0		/vf				
	Manhole 6' Flat Cover	2327.030	3.00 ea	39.25 /mh		0.00 /ea	0		/ea				
	Tracer Wire	2333.080	1,000.00 lf	39.25 /mh	393	1.52 /lf	1,672		/lf			2,065	2,241
	Tracer Wire Test Box	2333.080	5.00 ea	39.25 /mh	785	95.00 /ea	475		/ea			1,260	1,613
	Warning Tape Detectable	2333.080	1,000.00 lf	39.25 /mh	393	0.12 /lf	120		/lf			513	689
	Sub - Special Coatings for manholes	9960.100	1.00 ls	/ls		/ls			/ls				
	Supply Precast Package (42" pipe manholes)	2327.005	1.00 ls	/ls		/ls		45,500	/ls			45,500	45,500
	Storm HDPE corigated traffic rated add for lay down area per Jon		1,000.00 lf		25,693		288,913	45,500		18,951	6,732	385,789	397,351
	PIPE Pipe				25,693		288,913	45,500		18,951	6,732	385,789	397,351
	33 - NA North Aeration				25,693		288,913	45,500		18,951	6,732	385,789	397,351
	400533.03 HDPE Pipe				63,653		333,502	45,500		36,643	11,225	490,523	519,167
400539.37	Reinforced Concrete Pipe												
00 - SITE	Site												
	PIPE Pipe												
	02632- 12" SDR from Eq basin area RCP 00C22												
	Testing Vacuum/Low Head & Leak - Pipe	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		/ea			364	505
	Trench Excavtion 4- 6'	2333.010	48.00 lf	39.25 /mh	377	/lf			/lf			377	546
	Trench Backfill 4- 6'	2333.020	48.00 lf	39.25 /mh	471	/lf			/lf			471	683
	Utility Bedding Peastone	2305.200	15.30 bcy	/cy		30.00 /ton	735		/cy			735	735
	Spoils to Waste	2333.060	16.00 cy	39.25 /mh	63	/cy			/cy			63	91
	RCP Class III Glipp Joint 12	2632.103	48.00 lf	39.25 /mh	377	57.00 /lf	2,873		/lf			3,250	3,419
	RCP Glipp Joint Flared End 12	2632.152	1.00 ea	39.25 /mh	157	1,129.00 /ea	1,129		/ea			1,286	1,357
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	202	77	279	279
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	158	66	224	224
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	55	13	68	68
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			400.00 /Mnth	4	1	6	6
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	36	6	41	41
	Catch Basin 5' 36" x 36" inlet	2630.005	1.00 ea	39.25 /mh	1,256	3,250.00 /ea	3,250		/ea			4,506	5,071
	Supply Precast Package	2327.005	1.00 ls	/ls		/ls			/ls				
	Grout Pipe in Manhole 12"	2327.090	1.00 ea	39.25 /mh	157	40.00 /ea	40		/ea			197	268
	12" SDR from Eq basin area RCP 00C22		48.00 lf		3,171		8,076			456	163	11,866	13,294
	02632- 18" SDR by elec building RCP 00C23												
	Testing Vacuum/Low Head & Leak - Pipe	1166.100	1.00 ea	39.25 /mh	314	50.00 /ea	50		/ea			364	505
	Trench Excavtion 4- 6'	2333.010	62.00 lf	39.25 /mh	487	/lf			/lf			487	706
	Trench Backfill 4- 6'	2333.020	62.00 lf	39.25 /mh	608	/lf			/lf			608	882
	Utility Bedding Peastone	2305.200	18.64 bcy	/cy		30.00 /ton	895		/cy			895	895
	Spoils to Waste	2333.060	20.67 cy	39.25 /mh	81	/cy			/cy			81	118
	RCP Class IV Glipp Joint 18	2632.104	64.00 lf	39.25 /mh	452	51.00 /lf	3,427		/lf			3,879	4,083
	RCP Glipp Joint Flared End 18	2632.152	2.00 ea	39.25 /mh	314	1,129.00 /ea	2,258		/ea			2,572	2,713
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mn th			9,200.00 /Mnth	258	98	356	356
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mn th			7,200.00 /Mnth	202	84	286	286
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mn th			5,000.00 /Mnth	70	17	87	87
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			400.00 /Mnth	6	1	7	7
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mn th			3,250.00 /Mnth	46	7	53	53

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	02632- 18" SDR by elec building RCP 00C23												
	Manhole 5' with lid and cover	2327.020	2.00 ea	39.25 /mh	1,884	5,000.00 /ea	10,000		/ea			11,884	12,732
	Manhole Boots 18"	2327.090	4.00 ea	39.25 /mh	157	250.00 /ea	1,000		/ea			1,157	1,228
	Supply Precast Package	2327.005	1.00 ls	/ls		/ls			/ls				
	Grout Pipe in Manhole 18"	2327.090	4.00 ea	39.25 /mh	628	75.00 /ea	300		/ea			928	1,211
	18" SDR by elec building RCP 00C23		62.00 lf		4,925		17,930			580	207	23,643	25,859
	PIPE Pipe				8,097		26,006			1,036	370	35,509	39,153
	00 - SITE Site				8,097		26,006			1,036	370	35,509	39,153
	400539.37 Reinforced Concrete Pipe				8,097		26,006			1,036	370	35,509	39,153
	400559.34 Stainless Steel Slide Gates												
	00 - SITE Site												
	SITE Sitework												
	11-15 Gate valves site 00M03												
	Supply Slide Gate Package	11500.050	1.00 ls	/ls		/ls		145,000	/ls			145,000	145,000
	Leak Test Slide Gates	11500.050	10.00 ea	39.25 /mh	6,280	500.00 /ea	5,000		/ea			11,280	14,106
	Grout Equipment	11000.005	20.00 cf	39.25 /mh	12,560	115.00 /cf	2,300		/cf			14,860	20,512
	Anchor's for Gates	11500.050	24.00 ea	39.25 /mh	188	25.00 /ea	600		/ea			788	873
	Valve - Gate 30"pipe gate Weir structure North influent SG-4 (actuator support only)	2519.110	1.00 ea	39.25 /mh	1,256	1,500.00 /ea	1,500		/ea			2,756	3,321
	Valve - Gate 30" pipe gate Weir structure East influent SG-5 (actuator support only)	2519.110	1.00 ea	39.25 /mh	1,256	1,500.00 /ea	1,500		/ea			2,756	3,321
	Valve - Gate 36" pipe gate Primary clarifier #3 GAT-20.0013	2519.110	1.00 ea	39.25 /mh	1,884	0.00 /ea	0		/ea			1,884	2,732
	Valve - Gate 36" pipe gate Primary clarifier #4 GAT-20.0014	2519.110	1.00 ea	39.25 /mh	1,884	0.00 /ea	0		/ea			1,884	2,732
	Valve - Gate 24"pipe gate EQ pump station influent GAT-24.1003	2519.110	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Valve - Gate 18" pipe gate EQ basin 1 influent GAT-25.1103	2519.110	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Valve - Gate 12" pipe gate Eq basin 1 Effluent GAT-25.1107	2519.110	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Valve - Gate 18" pipe gate EQ basin 1 influantGAT-25.1123	2519.110	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Valve - Gate 12"pipe Gate EQ basin 2 effluent GAT-25.1127	2519.110	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Valve - Gate 36" x 36 Rect EQ basin isolation GAT-25.1105	2519.110	1.00 ea	39.25 /mh	1,884	0.00 /ea	0		/ea			1,884	2,732
	NBG Kit 125# SS 30in	15125.012	2.00 ea	39.25 /mh	236	1,083.00 /ea	2,166		/ea			2,402	2,507
	NBG Kit 125# SS 36in	15125.012	2.00 ea	39.25 /mh	236	1,875.00 /ea	3,750		/ea			3,986	4,091
	NBG Kit 125# SS 24in	15125.012	1.00 ea	39.25 /mh	118	756.00 /ea	756		/ea			874	927
	NBG Kit 125# SS 18in	15125.012	2.00 ea	39.25 /mh	236	418.00 /ea	836		/ea			1,072	1,177
	NBG Kit 125# SS 12in	15125.012	2.00 ea	39.25 /mh	236	183.00 /ea	366		/ea			602	707
	Gate valves site 00M03				32,334		18,774	145,000				196,108	210,659
	SITE Sitework				32,334		18,774	145,000				196,108	210,659
	00 - SITE Site				32,334		18,774	145,000				196,108	210,659
	400559.34 Stainless Steel Slide Gates				32,334		18,774	145,000				196,108	210,659
	412217.00 Protatable Davit Cranes												
	00 - GEN General												
	SITE Sitework												
	14-01 Davit Cranes												
	Hoist Davit Crane	14600.100	1.00 ea	39.25 /mh	157	0.00 /ea	0		/ea			157	228
	Hoist Base for Davit Crane	14600.100	4.00 ea	39.25 /mh	628	200.00 /ea	800		/ea			1,428	1,711
	Davit Cranes		1.00 EA		785		800					1,585	1,938
	SITE Sitework				785		800					1,585	1,938
	00 - GEN General				785		800					1,585	1,938
	412217.00 Protatable Davit Cranes				785		800					1,585	1,938
	412224.00 Monorail System												
	00 - GEN General												
	SITE Sitework												
	14-01 Hoists & Cranes												
	Sub - Hoists & Cranes davit included	14600.100	1.00 ls	/ls		163,037.00 /ls	163,037		/ls			163,037	163,037
	Monorail west sludge pump station	14600.100	1.00 ea	39.25 /mh	628	0.00 /ea	0		/ea			628	911
	Portable Gantry for EQ pump station	14600.100	1.00 ea	39.25 /mh	942	0.00 /ea	0		/ea			942	1,366
	Field Welding - Carbon Steel install beams inside tees	5000.985	160.00 hrs	39.25 /mh	6,280	/hrs		7,500	/hrs		2,500	16,280	19,106
	Hoists & Cranes				7,850		163,037	7,500			2,500	180,887	184,420
	SITE Sitework				7,850		163,037	7,500			2,500	180,887	184,420
	00 - GEN General				7,850		163,037	7,500			2,500	180,887	184,420
	412224.00 Monorail System				7,850		163,037	7,500			2,500	180,887	184,420
	430000.00 Engineered Biofilter												
	23 - WPS PS West Primary Sludge Pump Station												
	EQUIP Equipment												
	11-01 Hotsy Unit - Hot Water System												
	Hotsy Supply Package - 3000 PSI	11700.020	1.00 ls	/ls		16,900.00 /ls	16,900		/ls			16,900	16,900
	Hotsy Unit Install- 3000 psi	11700.050	1.00 ea	39.25 /mh	942	/ls			/ea			942	1,366
	Anchor's for Equipment	11000.005	6.00 ea	39.25 /mh	59	20.00 /ea	120		/ea			179	205
	Grout Equipment	11000.005	4.00 cf	39.25 /mh	471	110.00 /cf	440		/cf			911	1,123
	Misc Materials	11000.005	1.00 ea	39.25 /mh	39	100.00 /ea	100		/ea			139	157
	Start up and Training	11000.005	4.00 mnhr	39.25 /mh	157	/mnhr			/mnhr			157	228
	Special - Anchor Bolt Template	11000.005	1.00 ea	39.25 /mh	39	75.00 /ea	75		/ea			114	132

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	Hotsy Unit - Hot Water System		1.00		1,707		17,635					19,342	20,111
	EQUIP Equipment				1,707		17,635					19,342	20,111
	23 - WPS PS West Primary Sludge Pump Station				1,707		17,635					19,342	20,111
	430000.00 Engineered Biofilter				1,707		17,635					19,342	20,111
431124.00	Direct Drive High Speed Turbo Blower System												
	33 - NA North Aeration												
	EQUIP Equipment												
	11-09 North Aearation Blower Install												
	Supply Blower Package	11100.045	1.00 LS	/LS		725,890.00 /hp	725,890		/LS			725,890	725,890
	Turbo Blower 300hp	11100.045	2.00 ea	39.25 /mh	7,850	/hp			/ea			7,850	11,383
	Control Panel	11100.020	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Blower Misc -	11100.020	2.00 ea	39.25 /mh		/ea			/ea				
	Blower Inlet Filter 18"	11100.010	2.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Anchors for Equipment	11000.005	16.00 ea	39.25 /mh	157	20.00 /ea	320		/ea			477	548
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Misc Materials	11000.005	2.00 ea	39.25 /mh		250.00 /ea	500		/ea			500	500
	Start up and Training	11000.005	80.00 mnhr	39.25 /mh	3,140	/mn hr			/mnhr			3,140	4,553
	Extended Warranty - 5 yrs on blowers	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Grout Equipment	11000.005	5.00 cf	39.25 /mh	589	110.00 /cf	550		/cf			1,139	1,404
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	1,125	375	1,500	1,500
	Misc Fabrication #1 - Inlet filter support	5001.130	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	12.00 ea	39.25 /mh	118	8.00 /ea	96		/ea			214	267
	Special - Delegated Design for Anchors	11000.005	1.00 LS	39.25 /mh		0.00 /LS	0	2,500	/LS			2,500	2,500
	Anchor Bolt Template	11000.005	2.00 ea	39.25 /mh	628	75.00 /ea	150		/ea			778	1,061
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.04 mnth	8,800.00 /mnth	352	450.00 /mn th	18		10,400.00 /mnth	416	112	898	1,056
	North Aearation Blower Install		2.00 LS		15,699		727,524	2,500		1,541	487	747,751	754,815
	EQUIP Equipment				15,699		727,524	2,500		1,541	487	747,751	754,815
	33 - NA North Aeration				15,699		727,524	2,500		1,541	487	747,751	754,815
	431124.00 Direct Drive High Speed Turbo Blower System				15,699		727,524	2,500		1,541	487	747,751	754,815
431152.00	Rotary Screw Air Compressor System												
	23 - WPS PS West Primary Sludge Pump Station												
	EQUIP Equipment												
	11-11 Rotary Screw Compressor												
	Rotary Screw Compressor	11000.320	2.00 ea	39.25 /mh	2,512	/ea			/ea			2,512	3,642
	Reciever Tank	11000.320	1.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Master Control Panel	11000.320	1.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Anchors for Equipment	11000.005	16.00 ea	39.25 /mh	157	20.00 /ea	320		/ea			477	548
	Grout Equipment	11000.005	7.50 cf	39.25 /mh	883	110.00 /cf	825		/cf			1,708	2,106
	Misc Materials	11000.005	3.00 ea	39.25 /mh		250.00 /ea	750		/ea			750	750
	Start up and Training	11000.005	16.00 mnhr	39.25 /mh	628	/mn hr			/mnhr			628	911
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.10 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	450	150	600	600
	Anchor Template	11000.005	3.00 ea	39.25 /mh	118	75.00 /ea	225		/ea			343	396
	Rotary Screw Compressor		2.00 LS		5,554		2,120			450	150	8,274	10,773
	EQUIP Equipment				5,554		2,120			450	150	8,274	10,773
	23 - WPS PS West Primary Sludge Pump Station				5,554		2,120			450	150	8,274	10,773
	431152.00 Rotary Screw Air Compressor System				5,554		2,120			450	150	8,274	10,773
432340.10	Horizontal Self Priming Non Clog Centrifugal Pumps												
	24 - EQPS EQ Pump Station												
	EQUIP Equipment												
	11-01 EQ Pump Station Pumps												
	Supply Pump Package	11700.020	1.00 ls	/ls		246,670.00 /ls	246,670		/ls			246,670	246,670
	Horz Non Clog Centr Pump - 75 HP	11700.020	4.00 ea	39.25 /mh	2,512	/ea			/ea			2,512	3,642
	Anchors for Equipment	11000.005	24.00 ea	39.25 /mh	236	20.00 /ea	480		/ea			716	821
	Grout Equipment	11000.005	24.00 cf	39.25 /mh	2,826	110.00 /cf	2,640		/cf			5,466	6,738
	Misc Materials	11000.005	4.00 ea	39.25 /mh	157	50.00 /ea	200		/ea			357	428
	Pressure Gauge Assembly	11000.005	8.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	Start up and Training	11000.005	32.00 mnhr	39.25 /mh	1,256	/mn hr			/mnhr			1,256	1,821
	Special - Witnessed FAT Testing trip cost	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Special - Delegated Anchor Design	11000.005	1.00 LS	39.25 /mh		0.00 /LS	0	2,500	/LS			2,500	2,500
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Valve Air Release 1in - supplied by Pump Manufacturer	15110.005	4.00 ea	39.25 /mh	628	0.01 /ea	0		/ea			628	911
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.10 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	450	150	600	600
	Anchor Bolt Template	11000.005	4.00 ea	39.25 /mh	628	75.00 /ea	300		/ea			928	1,211

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	EQ Pump Station Pumps		4.00		8,910		250,290	2,500		450	150	262,300	266,309
	EQUIP Equipment				8,910		250,290	2,500		450	150	262,300	266,309
	24 - EQPS EQ Pump Station				8,910		250,290	2,500		450	150	262,300	266,309
	432340.10 Horizontal Self Priming Non Clog Centrifugal Pumps				8,910		250,290	2,500		450	150	262,300	266,309
432357.10	Progressive Cavity Pumps												
23 - WPS	PS West Primary Sludge Pump Station												
	EQUIP Equipment												
	11-01 WSPSPS Progressive Cavity Pumps												
	Supply Pump Package	11700.020	1.00 ls	/ls		163,120.00 /ls	163,120		/ls			163,120	163,120
	Progressive Cavity Pump - 30 HP	11700.070	3.00 ea	39.25 /mh	2,826	/ls			/ea			2,826	4,098
	Anchors for Equipment	11000.005	18.00 ea	39.25 /mh	177	20.00 /ea	360		/ea			537	616
	Grout Equipment	11000.005	13.50 cf	39.25 /mh	1,590	110.00 /cf	1,485		/cf			3,075	3,790
	Misc Materials	11000.005	3.00 ea	39.25 /mh	118	250.00 /ea	750		/ea			868	921
	Pressure Gauge Assembly	11000.005	3.00 ea	39.25 /mh	471	0.01 /ea	0		/ea			471	683
	Start up and Training	11000.005	24.00 mnhr	39.25 /mh	942	/mn hr			/mnhr			942	1,366
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Special - Delegated Anchor Design	11000.005	1.00 LS	39.25 /mh		/LS		5,000	/LS			5,000	5,000
	Special - Anchor Bolt Template	11000.005	3.00 ea	39.25 /mh	471	75.00 /ea	225		/ea			696	908
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	0.10 Mnth	/Mnth		/Mn th			4,500.00 /Mnth	450	150	600	600
	WSPSPS Progressive Cavity Pumps		3.00		6,594		165,940	5,000		450	150	178,134	181,101
	EQUIP Equipment				6,594		165,940	5,000		450	150	178,134	181,101
	23 - WPS PS West Primary Sludge Pump Station				6,594		165,940	5,000		450	150	178,134	181,101
	432357.10 Progressive Cavity Pumps				6,594		165,940	5,000		450	150	178,134	181,101
432450.10	Vertical Turbine Short Setting Centrifugal Pumps												
45 - RPUMP	Reuse Pump Station												
	EQUIP Equipment												
	11-01 Reuse PS - Vertical Turbine Pumps												
	Supply Pump Package	11700.020	1.00 ls	/ls		722,310.00 /ls	722,310		/ls			722,310	722,310
	Vertical Turbine Pump - 350 HP	11700.150	4.00 ea	39.25 /mh	5,024	/ls			/ea			5,024	7,285
	Anchors for Equipment	11000.005	16.00 ea	39.25 /mh	157	20.00 /ea	320		/ea			477	548
	Grout Equipment	11000.005	6.00 cf	39.25 /mh	942	110.00 /cf	660		/cf			1,602	2,026
	Misc Materials	11000.005	4.00 ea	39.25 /mh		250.00 /ea	1,000		/ea			1,000	1,000
	Start up and Training	11000.005	32.00 mnhr	39.25 /mh	1,256	/mn hr			/mnhr			1,256	1,821
	Spare Parts	11000.005	1.00 LS	/LS		/L S			/LS				
	Special - Witnessed FAT Testing Travel Expense	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Special - Delegated Design for Anchors	11000.005	1.00 LS	39.25 /mh	39	/LS		2,500	/LS			2,539	2,557
	Anchor Bolt Template	11000.005	4.00 ea	39.25 /mh	1,256	35.00 /ea	140		/ea			1,396	1,961
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	4,600.00 /mnth	1,150	450.00 /mn th	113		10,400.00 /mnth	2,600	700	4,563	5,080
	Reuse PS - Vertical Turbine Pumps		1.00		9,864		724,543	2,500		2,600	700	740,206	744,645
	EQUIP Equipment				9,864		724,543	2,500		2,600	700	740,206	744,645
	45 - RPUMP Reuse Pump Station				9,864		724,543	2,500		2,600	700	740,206	744,645
	432450.10 Vertical Turbine Short Setting Centrifugal Pumps				9,864		724,543	2,500		2,600	700	740,206	744,645
432500.10	Submersible Sump Pumps												
00 - GEN	General												
	EQUIP Equipment												
	11-02 Submersible Pumps												
	Supply Submersible Pumps	11700.110	1.00 LS	/LS		54,850.00 /LS	54,850		/LS			54,850	54,850
	Submersible Pumps		1.00 ls				54,850					54,850	54,850
	EQUIP Equipment						54,850					54,850	54,850
	00 - GEN General						54,850					54,850	54,850
23 - WPS	PS West Primary Sludge Pump Station												
	EQUIP Equipment												
	11-02 Sump Duplex Pump System												
	Submersible Pump - 1 HP	11700.110	2.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Control Panel	11700.110	1.00 ls	39.25 /mh	79	/ls			/ls			79	114
	Level Controls	11700.110	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Misc Materials	11000.005	2.00 ea	39.25 /mh		50.00 /ea	100		/ea			100	100
	Anchors for Equipment	11000.005	8.00 ea	39.25 /mh	79	20.00 /ea	160		/ea			239	274
	Grout Equipment	11000.005	3.00 cf	39.25 /mh	353	110.00 /cf	330		/cf			683	842
	Start up and Training	11000.005	8.00 mnhr	39.25 /mh	314	/mn hr			/mnhr			314	455
	Sump Duplex Pump System		2.00 ls		1,923		590					2,513	3,379

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	EQUIP Equipment				1,923		590					2,513	3,379
	23 - WPS PS West Primary Sludge Pump Station				1,923		590					2,513	3,379
	24 - EQPS EQ Pump Station												
	EQUIP Equipment												
	11-02 Sump Duplex Pump System												
	Submersible Pump - 1 HP	11700.110	2.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Control Panel	11700.110	1.00 ls	39.25 /mh	79	/ls			/ls			79	114
	Level Controls	11700.110	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Misc Materials	11000.005	2.00 ea	39.25 /mh		50.00 /ea	100		/ea			100	100
	Anchors for Equipment	11000.005	8.00 ea	39.25 /mh	79	20.00 /ea	160		/ea			239	274
	Grout Equipment	11000.005	3.00 cf	39.25 /mh	353	110.00 /cf	330		/cf			683	842
	Start up and Training	11000.005	8.00 mnhr	39.25 /mh	314	/mn hr			/mnhr			314	455
	Sump Duplex Pump System		2.00 ls		1,923		590					2,513	3,379
	EQUIP Equipment				1,923		590					2,513	3,379
	24 - EQPS EQ Pump Station				1,923		590					2,513	3,379
	27 - ODOR Odor Control												
	EQUIP Equipment												
	11-02 Sump Duplex Pump System												
	Submersible Pump - 1 HP	11700.110	2.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Control Panel	11700.110	1.00 ls	39.25 /mh	79	/ls			/ls			79	114
	Level Controls	11700.110	1.00 ls	39.25 /mh	157	/ls			/ls			157	228
	Misc Materials	11000.005	2.00 ea	39.25 /mh		50.00 /ea	100		/ea			100	100
	Anchors for Equipment	11000.005	8.00 ea	39.25 /mh	79	20.00 /ea	160		/ea			239	274
	Grout Equipment	11000.005	3.00 cf	39.25 /mh	353	110.00 /cf	330		/cf			683	842
	Start up and Training	11000.005	8.00 mnhr	39.25 /mh	314	/mn hr			/mnhr			314	455
	Sump Duplex Pump System		2.00 ls		1,923		590					2,513	3,379
	EQUIP Equipment				1,923		590					2,513	3,379
	27 - ODOR Odor Control				1,923		590					2,513	3,379
	432500.10 Submersible Sump Pumps				5,770		56,620					62,390	64,986
462423.00	Inline Grinder												
	23 - WPS PS West Primary Sludge Pump Station												
	EQUIP Equipment												
	11-24 Inline Grinders												
	Inline Grinder Supply	11000.230	1.00 ls	/ls		97,060.00 /ls	97,060		/ls			97,060	97,060
	Inline Grinder Install - 140 gpm	11000.370	3.00 ea	39.25 /mh	1,884	/ea			/ea			1,884	2,732
	Control Panel	11000.230	3.00 ea	39.25 /mh	942	/ea			/ea			942	1,366
	Grout Equipment	11000.005	1.50 cf	39.25 /mh	353	110.00 /cf	165		/cf			518	677
	Anchors for Equipment	11000.005	12.00 ea	39.25 /mh	118	20.00 /ea	240		/ea			358	411
	Misc Materials	11000.005	3.00 ea	39.25 /mh		150.00 /ea	450		/ea			450	450
	Start up and Training	11000.005	12.00 mnhr	39.25 /mh	471	/mn hr			/mnhr			471	683
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Anchor Bolt Template	11000.005	3.00 ea	39.25 /mh	118	35.00 /ea	105		/ea			223	276
	Inline Grinders		3.00 LS		3,886		98,020					101,906	103,654
	EQUIP Equipment				3,886		98,020					101,906	103,654
	23 - WPS PS West Primary Sludge Pump Station				3,886		98,020					101,906	103,654
	462423.00 Inline Grinder				3,886		98,020					101,906	103,654
464126.00	Large Bubble Mixing System												
	25 - EQ EQ Basins												
	EQUIP Equipment												
	11-23 Large Bubble Mixing System												
	Aeration Equipment Supply	11000.010	1.00 ls	39.25 /mh	39	794,190.00 /ls	794,190		/ls			794,229	794,247
	Diffused Air Drop Pipe	11000.010	28.00 ea	39.25 /mh	8,792	/ea			/ea			8,792	12,748
	Diffused Air Drop Pipe Support - SS304	11000.010	22.00 ea	39.25 /mh	864	/ea			/ea			864	1,252
	Diffused Air Header	11000.010	28.00 ea	39.25 /mh	1,099	/ea			/ea			1,099	1,594
	Diffused Air Header Support - SS304	11000.010	156.00 ea	39.25 /mh	6,123	/ea			/ea			6,123	8,878
	Diffused Air Laterals	11000.010	28.00 ea	39.25 /mh	8,792	/ea			/ea			8,792	12,748
	Diffused Air Lateral Supports	11000.010	350.00 ea	39.25 /mh	6,869	/ea			/ea			6,869	9,960
	Diffused Air Diffusers	11000.010	220.00 ea	39.25 /mh	864	/ea			/ea			864	1,252
	Anchors for Equipment - Valve Panel	11000.005	8.00 ea	39.25 /mh	79	20.00 /ea	160		/ea			239	274
	Misc Materials	11000.005	1.00 ea	39.25 /mh		1,000.00 /ea	1,000		/ea			1,000	1,000
	System Test	11000.005	2.00 ea	39.25 /mh	1,884	250.00 /ea	500		/ea			2,384	3,232
	Start up and Training	11000.005	24.00 mnhr	39.25 /mh	942	/mn hr			/mnhr			942	1,366
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Special - Delegated Design for Pipe Supports	11000.005	1.00 ls	39.25 /mh	39	/ls		5,000	/ls			5,039	5,057
	PS Strut Post Base SS304	15060.478	4.00 ea	39.25 /mh	47	70.00 /ea	280		/ea			327	348
	PS Epoxy Anchor 3/4 x 5-1/2in SS304	15060.112	50.00 ea	39.25 /mh	98	15.00 /ea	750		/ea			848	892
	PS Epoxy Anchor 1/2 x 5-1/2in SS304	15060.112	280.00 ea	39.25 /mh	550	10.00 /ea	2,800		/ea			3,350	3,597
	PS Strut SS 1-5/8 x 1-5/8 - SS304	15060.476	240.00 lf	39.25 /mh	2,826	15.00 /lf	3,600		/lf			6,426	7,698

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	11-23 Large Bubble Mixing System												
	PS Pipe Strut Clamp SS 2in -SS304	15060.486	260.00 ea	39.25 /mh	3,062	8.50 /ea	2,210		/ea			5,272	6,649
	Epoxy for Anchors - SET XP 8.5 oz	5001.054	125.00 ea	39.25 /mh	245	30.00 /ea	3,750		/ea			3,995	4,106
	Press Tool of pipe assembly	1900.300	1.00 ls	/ls		/ls			5,000.00 /ls	5,000		5,000	5,000
	Large Bubble Mixing System				43,212		809,240	5,000		5,000		862,452	881,898
	EQUIP Equipment				43,212		809,240	5,000		5,000		862,452	881,898
	25 - EQ EQ Basins				43,212		809,240	5,000		5,000		862,452	881,898
	464126.00 Large Bubble Mixing System				43,212		809,240	5,000		5,000		862,452	881,898
464320.00	Circular Primary Clarifier Equipment												
	20 - PC 4 Primary Clarifier 4												
	EQUIP Equipment												
	11-21 Primary Clarifier #4 Equipment												
	Clarifer Package Supply All (primary and 2ea secondary)	11000.100	1.00 ls	/ls		2,082,635.00 /ea	2,082,635		/ls			2,082,635	2,082,635
	Clarifier 95' diameter	11000.100	1.00 ea	39.25 /mh	18,840	/ea			/ea			18,840	27,318
	Clarifier Welding - bridge and alum weld for scum baffle	11000.100	1.00 ls	39.25 /mh		/ls		16,400	/ls			16,400	16,400
	Center Column Anchors	11000.100	15.00 ea	39.25 /mh	1,178	/ea			/ea			1,178	1,707
	Clarifier Control Panel	11000.100	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Misc Materials	11000.005	1.00 ea	39.25 /mh		1,000.00 /ea	1,000		/ea			1,000	1,000
	Grout Equipment	11000.005	42.00 cf	39.25 /mh	3,297	110.00 /cf	4,620		/cf			7,917	9,401
	Start up and Training	11000.005	40.00 mnhr	39.25 /mh	1,570	/mnhr			/mnhr			1,570	2,277
	Supply Weir and Baffle Package	11000.460	1.00 ls	/ls		/ls			/ls				
	Install Weirs	11000.460	300.00 lf	39.25 /mh	5,888	/lf			/lf			5,888	8,537
	Install Baffles	11000.460	300.00 lf	39.25 /mh	8,831	/lf			/lf			8,831	12,805
	Final Level and Adjust Weirs	11000.460	1.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Clarifier Torque Test	11000.100	1.00 EA	39.25 /mh	942	/EA			/EA			942	1,366
	Special - Annual PM visit @ 1 Yr	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Special - Delegated Design for Anchors	11000.005	1.00 LS	39.25 /mh	39	/LS		7,500	/LS			7,539	7,557
	Anchor Bolt Template	11000.005	1.00 ea	39.25 /mh	314	250.00 /ea	250		/ea			564	705
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	1.00 mnth	8,800.00 /mnth	8,800	550.00 /mnth	550		17,500.00 /mnth	17,500	3,750	30,600	34,560
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	1,500	100	1,600	1,600
	Epoxy for Anchors - SET XP 8.5 oz	5001.054	25.00 ea	39.25 /mh	49	30.00 /ea	750		/ea			799	821
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	150.00 ea	39.25 /mh	294	8.00 /ea	1,200		/ea			1,494	1,627
	Epoxy Anchor 5/8 x 4-1/2in SS 316	5001.054	80.00 ea	39.25 /mh	157	10.00 /ea	800		/ea			957	1,028
	Epoxy Anchor 3/4 x 10in SS 316	5001.054	4.00 ea	39.25 /mh	8	20.00 /ea	80		/ea			88	91
	Caulking 1.5 gal unit 3/4d x 3/4w - behind wier plate	7920.300	300.00 lf	39.25 /mh	353	110.00 /unit	708		/lf			1,061	1,220
	Primary Clarifier #4 Equipment		1.00 ls		51,384		2,092,593	23,900		19,000	3,850	2,190,727	2,213,850
	EQUIP Equipment				51,384		2,092,593	23,900		19,000	3,850	2,190,727	2,213,850
	20 - PC 4 Primary Clarifier 4				51,384		2,092,593	23,900		19,000	3,850	2,190,727	2,213,850
	464320.00 Circular Primary Clarifier Equipment				51,384		2,092,593	23,900		19,000	3,850	2,190,727	2,213,850
464323.00	Spiral Scraper Circular Secondary Clarifier Equipment												
	36 - SC 3&4 Secondary Clarifiers #3 and #4												
	EQUIP Equipment												
	11-21 SC Clarifier #3 Equipment												
	Clarifer Package Supply for SC #3 and #4	11000.100	1.00 ls	/ls		0.01 /ea	0		/ls			0	0
	Clarifier 85' diameter	11000.100	1.00 ea	39.25 /mh	18,840	/ea			/ea			18,840	27,318
	Clarifier Welding	11000.100	1.00 ls	39.25 /mh	39	/ls		2,000	/ls			2,039	2,057
	Center Column Anchors	11000.100	15.00 ea	39.25 /mh	1,178	/ea			/ea			1,178	1,707
	Clarifier Control Panel	11000.100	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Misc Materials	11000.005	1.00 ea	39.25 /mh	39	1,000.00 /ea	1,000		/ea			1,039	1,057
	Grout Equipment	11000.005	8.33 cf	39.25 /mh	981	110.00 /cf	917		/cf			1,898	2,339
	Start up and Training	11000.005	40.00 mnhr	39.25 /mh	1,570	/mnhr			/mnhr			1,570	2,277
	Supply Weir and Baffle Package	11000.460	1.00 ls	/ls		/ls			/ls				
	Install Weirs	11000.460	270.00 lf	39.25 /mh	5,299	/lf			/lf			5,299	7,683
	Install Baffles	11000.460	270.00 lf	39.25 /mh	7,948	/lf			/lf			7,948	11,525
	Final Level and Adjust Weirs	11000.460	1.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Clarifier Torque Test	11000.100	1.00 EA	39.25 /mh	942	/EA			/EA			942	1,366
	Clarifier Launder Covers	11000.100	1.00 ls	39.25 /mh		/ls			/ls				
	Special - First Annual PM Site Visit	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	1.00 mnth	4,600.00 /mnth	4,600	450.00 /mnth	450		10,400.00 /mnth	10,400	2,800	18,250	20,320
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	1,500	100	1,600	1,600
	Epoxy for Anchors - SET XP 8.5 oz	5001.054	20.00 ea	39.25 /mh	39	30.00 /ea	600		/ea			639	657
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	135.00 ea	39.25 /mh	265	8.00 /ea	1,080		/ea			1,345	1,464
	Epoxy Anchor 5/8 x 4-1/2in SS 316	5001.054	72.00 ea	39.25 /mh	141	10.00 /ea	720		/ea			861	925
	Epoxy Anchor 3/4 x 10in SS 316	5001.054	4.00 ea	39.25 /mh	8	20.00 /ea	80		/ea			88	91

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	11-21 SC Clarifier #3 Equipment												
	Caulking 1.5 gal unit 3/4d x 3/4w - behind wier plate	7920.300	270.00 lf	39.25 /mh	318	110.00 /unit	637		/lf			955	1,098
	SC Clarifier #3 Equipment		1.00 ls		43,032		5,483	2,000		11,900	2,900	65,315	84,679
	11-21 SC Clarifier #4 Equipment												
	Clarifier 80' diameter	11000.100	1.00 ea	39.25 /mh	18,840	/ea			/ea			18,840	27,318
	Clarifier Welding	11000.100	1.00 ls	39.25 /mh	39	/ls		2,000	/ls			2,039	2,057
	Center Column Anchors	11000.100	15.00 ea	39.25 /mh	1,178	/ea			/ea			1,178	1,707
	Clarifier Control Panel	11000.100	1.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Misc Materials	11000.005	1.00 ea	39.25 /mh		1,000.00 /ea	1,000		/ea			1,000	1,000
	Grout Equipment	11000.005	8.33 cf	39.25 /mh	981	110.00 /cf	917		/cf			1,898	2,339
	Start up and Training	11000.005	40.00 mnhr	39.25 /mh	1,570	/mnhr			/mnhr			1,570	2,277
	Supply Weir and Baffle Package	11000.460	1.00 ls	/ls		/ls			/ls				
	Install Weirs	11000.460	255.00 lf	39.25 /mh	5,004	/lf			/lf			5,004	7,256
	Install Baffles	11000.460	255.00 lf	39.25 /mh	7,507	/lf			/lf			7,507	10,885
	Final Level and Adjust Weirs	11000.460	1.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Clarifier Torque Test	11000.100	1.00 EA	39.25 /mh	942	/EA			/EA			942	1,366
	Clarifier Launder Covers	11000.100	1.00 ls	39.25 /mh		/ls			/ls				
	Special - First Annual PM Site Visit	11000.005	1.00 LS	39.25 /mh	39	/LS			/LS			39	57
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	1.00 mnth	4,600.00 /mnth	4,600	450.00 /mnth	450		10,400.00 /mnth	10,400	2,800	18,250	20,320
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	1,500	100	1,600	1,600
	Epoxy for Anchors - SET XP 8.5oz	5001.054	20.00 ea	39.25 /mh	39	30.00 /ea	600		/ea			639	657
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	135.00 ea	39.25 /mh	265	8.00 /ea	1,080		/ea			1,345	1,464
	Epoxy Anchor 5/8 x 4-1/2in SS 316	5001.054	72.00 ea	39.25 /mh	141	10.00 /ea	720		/ea			861	925
	Epoxy Anchor 3/4 x 10in SS 316	5001.054	4.00 ea	39.25 /mh	8	20.00 /ea	80		/ea			88	91
	Caulking 1.5 gal unit 3/4d x 3/4w - behind wier plate	7920.300	255.00 lf	39.25 /mh	300	110.00 /unit	601		/lf			902	1,037
	SC Clarifier #4 Equipment		1.00 ls		42,239		5,448	2,000		11,900	2,900	64,487	83,494
	EQUIP Equipment				85,270		10,932	4,000		23,800	5,800	129,802	168,174
	36 - SC 3&4 Secondary Clarifiers #3 and #4				85,270		10,932	4,000		23,800	5,800	129,802	168,174
	464323.00 Spiral Scraper Circular Secondary Clarifier Equipment				85,270		10,932	4,000		23,800	5,800	129,802	168,174
467312.10	Truss Supported FRP Flat Covers												
20 - PC 4	Primary Clarifier 4												
	EQUIP Equipment												
	11-04 FRP Clarifier Cover												
	Supply FRP Cover Package	11000.395	1.00 ls	/ls		1,686,800.00 /ls	1,686,800		/ls			1,686,800	1,686,800
	Support Trusses	11000.395	8.00 ea	39.25 /mh	16,328	/ea			/ea			16,328	23,676
	FRP Planking Install	5001.155	7,090.00 sf	39.25 /mh	25,633	0.00 /sf	0		/sf			25,633	37,167
	Hatches	11000.395	30.00 ea	39.25 /mh	2,355	/ea			/ea			2,355	3,415
	Grout Equipment	11000.005	3.00 cf	39.25 /mh	707	110.00 /cf	330		/cf			1,037	1,354
	Closure Flashing	5001.155	300.00 lf	39.25 /mh	11,775	/lf			/lf			11,775	17,074
	Misc Materials	11000.395	1.00 ls	39.25 /mh	39	250.00 /ls	250		/ls			289	307
	Special - Delegated Design of Cover System	11000.005	1.00 ls	39.25 /mh	39	/ls			/ls			39	57
	Special - Delegated Design for Anchors	11000.005	1.00 ls	39.25 /mh	39	/ls		0	/ls			39	57
	Truss Bearing Pads	5001.130	16.00 ea	39.25 /mh	1,256	/ea			/ea			1,256	1,821
	Special - Air Leakage Testing	11000.005	1.00 ls	39.25 /mh	628	/ls			/ls			628	911
	FRP planking support angle	5001.155	300.00 lf	39.25 /mh	4,648	/lf			/lf			4,648	6,740
	Epoxy Anchor 3/4 x 7in SS 316	5001.054	35.00 ea	39.25 /mh	69	16.00 /ea	560		/ea			629	660
	Epoxy Anchor 1/2 x 5-1/2in SS 316	5001.054	150.00 ea	39.25 /mh	294	8.00 /ea	1,200		/ea			1,494	1,627
	Epoxy for Anchors - SET XP 8.5 oz	5001.054	15.00 ea	39.25 /mh	29	30.00 /ea	450		/ea			479	493
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	1.00 mnth	4,600.00 /mnth	4,600	450.00 /mnth	450		10,400.00 /mnth	10,400	2,800	18,250	20,320
	Caulking 1.5 gal unit 3/8d x 3/8w	7920.300	900.00 lf	39.25 /mh	1,060	110.00 /unit	530		/lf			1,590	2,067
	FRP Clarifier Cover				69,499		1,690,570			10,400	2,800	1,773,269	1,804,544
	EQUIP Equipment				69,499		1,690,570			10,400	2,800	1,773,269	1,804,544
	20 - PC 4 Primary Clarifier 4				69,499		1,690,570			10,400	2,800	1,773,269	1,804,544
	467312.10 Truss Supported FRP Flat Covers				69,499		1,690,570			10,400	2,800	1,773,269	1,804,544
467883.00	Odor Control System												
27 - ODOR	Odor Control												
	PIPE Pipe												
	0330 4- Underslab Encasement for 2"/3"/4" Condensate Drain/sump disch.												
	Excavation - Mass	2317.105	25.00 cy	39.25 /mh	98	/cy			/cy			98	142
	Backfill - Mass	2319.302	10.00 cy	39.25 /mh	59	/cy			/cy			59	85
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea			0	0
	Formwork Pipe Encasement	3100.108	516.00 sf	39.25 /mh	5,063	2.00 /sf	1,084		/sf			6,147	8,425
	Place Pipe Encasement	3310.195	18.12 cy	39.25 /mh	761	210.00 /cy	4,070		/cy			4,831	5,174
	Nails and Hardware	3150.200	516.00 sf	/sf		0.04 /sf	21		/sf			21	21

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	0330 4- Underslab Encasement for 2"/3"/4" Condensate Drain/sump disch.												
	Form Ties Specialty	3150.632	67.00 ea	39.25 /mh	526	5.00 /ea	335		/ea			861	1,098
	Pipe Tie Downs (Small)	3150.200	33.00 ea	39.25 /mh	2,591	50.00 /ea	1,650		/ea			4,241	5,406
	Dimension Lumber	3150.200	516.00 sf	/sf		0.30 /sf	155		/sf			155	155
	Oil SOG Form	3100.310	516.00 sf	39.25 /mh	405	0.06 /sf	33		/sf			438	620
	Finish- Rough	3350.110	250.00 sf	39.25 /mh	88	0.01 /sf	2		/sf			90	130
	Liquid Curing Compounds	3390.170	250.00 sf	39.25 /mh	20	0.08 /sf	19		/sf			38	47
	Bobcat E85 Mini-Excavator 9.5 ton (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			5,510.00 /Mnth	2,755	1,000	3,755	3,755
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,000	2,900	2,900
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	350	1,270	1,270
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			400.00 /Mnth	100	25	125	125
	Misc. Pad Rebar	3210.104	1.50 tn	39.25 /mh	1,649	1,600.00 /tn	2,520		/tn			4,169	4,910
	Underslab Encasement for 2"/3"/4" Condensate Drain/sump disch.		18.12 CY		11,259		9,888			5,675	2,375	29,197	34,263
	11-25 Odor Control System Equipment												
	Odor Control System Supply	11000.230	1.00 ls	/ls		1,138,325.00 /ls	1,138,325		/ls			1,138,325	1,138,325
	Biofilter Basin Cover FRP	11000.005	1.00 ls	39.25 /mh	39	104,000.00 /ls	104,000	0	/ls			104,039	104,057
	Control Panel - Water and Master	11000.230	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Grout Equipment	11000.005	9.00 cf	39.25 /mh	1,060	110.00 /cf	990		/cf			2,050	2,527
	Anchors for Equipment	11000.005	16.00 ea	39.25 /mh	157	20.00 /ea	320		/ea			477	548
	Misc Materials	11000.005	4.00 ea	39.25 /mh		1,000.00 /ea	4,000		/ea			4,000	4,000
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls				
	Special - Delegated Design for Carbon Tank Anchors	11000.005	1.00 ls	39.25 /mh		/ls		0	/ls				
	Odor Control Fan -	11000.260	4.00 ea	39.25 /mh	2,512	/ea			/ea			2,512	3,642
	Odor Control Media	11000.260	4,570.00 cf	39.25 /mh	6,278	/cf			/cf			6,278	9,103
	Mist Eliminator	11000.260	2.00 ea	39.25 /mh	628	/ls			/ea			628	911
	Odor Control Dampers	11000.260	12.00 ea	39.25 /mh	3,768	/ea			/ea			3,768	5,464
	Flex Couplings	15112.550	8.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Fiberglass Pipe 26"	15214.100	90.00 lf	39.25 /mh	7,065	/lf			/lf			7,065	10,244
	Fiberglass Pipe 90 Ells 26"	15214.500	3.00 ea	39.25 /mh	236	/ea			/ea			236	341
	Fiberglass Pipe Tees 26"	15214.700	7.00 ea	39.25 /mh	550	/ea			/ea			550	797
	Fiberglass Pipe Caps 26"	15214.200	2.00 ea	39.25 /mh	157	/ea			/ea			157	228
	Sleeve Steel WS-30-37-S-	15121.800	1.00 ea	39.25 /mh	314	2,500.00 /ea	2,500		/ea			2,814	2,955
	Link Seal Size LS-400-S	15123.100	25.00 ea	39.25 /mh	147	18.00 /ea	450		/ea			597	663
	Fiberglass Reducers to Structures	15214.600	5.00 ea	39.25 /mh	393	/ea			/ea			393	569
	Grout Sleeve 24in	15124.300	1.00 ea	39.25 /mh	157	50.00 /ea	50		/ea			207	278
	Carbon Filter Vessel - 5000 gal	11000.395	2.00 ea	39.25 /mh	3,768	/ea			/ea			3,768	5,464
	Biofilter Air Distribution Plenum	13222.100	645.00 sf	39.25 /mh	12,658	/sf			/sf			12,658	18,354
	Carbon Filter Media	13220.200	1,360.00 cf	39.25 /mh	4,804	/cf			/cf			4,804	6,966
	Humidification Chamber Media	13220.200	90.00 cf	39.25 /mh	318	/cf			/cf			318	461
	Epoxy Anchor 3/4 x 7in SS 316	5001.054	16.00 ea	39.25 /mh	31	16.00 /ea	256		/ea			287	302
	CPVC Sch 80 PIPE 2"	15211.403	100.00 lf	39.25 /mh	824	8.00 /lf	800		/lf			1,624	1,995
	CPVC Sch 80 90 EL 2" S	15211.407	15.00 ea	39.25 /mh	124	16.00 /ea	240		/ea			364	419
	CPVC Sch 80 45 EL 2" S	15211.408	10.00 ea	39.25 /mh	82	17.00 /ea	170		/ea			252	290
	CPVC Sch 80 TEE 2" S	15211.411	4.00 ea	39.25 /mh	33	21.00 /ea	84		/ea			117	132
	CPVC Sch 80 TEE 2X2X1" S	15211.412	8.00 ea	39.25 /mh	66	40.00 /ea	320		/ea			386	416
	CPVC Sch 80 MALE ADPT 2" SXMT	15211.417	2.00 ea	39.25 /mh	16	21.00 /ea	42		/ea			58	66
	CPVC Sch 80/VIT UNION 2" S	15211.419	10.00 ea	39.25 /mh	82	55.00 /ea	550		/ea			632	670
	CPVC Sch 80 PIPE 1"	15211.403	100.00 lf	39.25 /mh	824	4.00 /lf	400		/lf			1,224	1,595
	CPVC Valve Ball True Union EPDM 2" S & T	15211.520	2.00 ea	39.25 /mh	16	160.00 /ea	320		/ea			336	344
	CPVC Valve Ball True Union EPDM 1" S & T	15211.520	10.00 ea	39.25 /mh	82	75.00 /ea	750		/ea			832	870
	CPVC Sch 80 BUSH 1X1/2" SPGXT	15211.431	40.00 ea	39.25 /mh	330	10.00 /ea	400		/ea			730	878
	Sleeve PVC 4" (S80)	15121.900	2.00 ea	39.25 /mh	118	75.00 /ea	150		/ea			268	321
	Link Seal Size LS-300-S	15123.100	30.00 ea	39.25 /mh	177	8.50 /ea	255		/ea			432	511
	PS Epoxy Anchor 1/2 x 5-1/2in SS304	15060.112	40.00 ea	39.25 /mh	79	10.00 /ea	400		/ea			479	514
	PS Strut SS 1-5/8 x 1-5/8 - SS304	15060.476	50.00 lf	39.25 /mh	589	15.00 /lf	750		/lf			1,339	1,604
	PS Pipe Strut Clamp SS 2in - SS304	15060.486	25.00 ea	39.25 /mh	294	8.50 /ea	213		/ea			507	639
	PS Pipe Strut Clamp SS 1in - SS304	15060.486	10.00 ea	39.25 /mh	118	5.00 /ea	50		/ea			168	221
	PS Pipe Stand w/ U-bolt for 2" CPVC 1ft 0in floor to CL SS - Sprinklers lines	15060.414	24.00 ea	39.25 /mh	942	400.00 /ea	9,600		/ea			10,542	10,966
	Sprinkler Head	15231.205	30.00 ea	39.25 /mh	1,178	/ea			/ea			1,178	1,707
	Manitowoc 12000 - 120 Ton (332 HP) (L)	1900.100	2.00 mnth	8,800.00 /mnth	17,600	550.00 /mnth	1,100		17,500.00 /mnth	35,000	7,500	61,200	69,120
	RT Telescopic Forklift (8,000 lb) (110 HP) (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	9,000	3,000	12,000	12,000
	Anchor Bolt Templates	11000.005	1.00 ls	39.25 /mh	39	500.00 /ls	500		/ls			539	557
	PS Strut Post Base SS304	15060.478	2.00 ea	39.25 /mh	24	70.00 /ea	140		/ea			164	174
	Genie Material Lift (800 lb Capacity)	1900.300	2.00 Mnth	/Mnth		/Mnth			400.00 /Mnth	800	20	820	820
	Carbon Tank Anchors	11000.395	30.00 ea	39.25 /mh	589	25.00 /ea	750		/ea			1,339	1,604
	Carbon Tank Ladder	11000.395	2.00 ea	39.25 /mh	628	/ea			/ea			628	911
	Carbon Tank Safety Equip	11000.395	2.00 ea	39.25 /mh	314	/ea			/ea			314	455
	Carbon Tank Misc Materials	11000.395	2.00 ea	39.25 /mh		300.00 /ea	600		/ea			600	600
	Odor Control System Equipment				71,149		1,269,475			44,800	10,520	1,395,944	1,427,961
	150-55 40 2"/4" Odor Control Condensate Drain Pipe												

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Amount	Total Amount	Grand Total
	150-55 40 2"/4" Odor Control Condensate Drain Pipe												
	PVC Sch 40 Pipe 2" PE	15211.103	100.00 lf	39.25 /mh	1,178	2.00 /lf	220		/lf			1,398	1,927
	PVC Sch 40 Pipe 3" PE	15211.103	25.00 lf	39.25 /mh	294	3.00 /lf	83		/lf			377	509
	PVC Sch 40 90 Ell Socket x Socket 2	15211.107	22.00 ea	39.25 /mh	259	3.00 /ea	66		/ea			325	442
	PVC Sch 40 Pipe 4" PE	15211.103	40.00 lf	39.25 /mh	471	5.00 /lf	220		/lf			691	903
	PVC Sch 40 45 Ell SOCxSOC 2	15211.108	10.00 ea	39.25 /mh	118	3.00 /ea	30		/ea			148	201
	PVC Sch 40 90 Ell Socket x Socket 3	15211.107	12.00 ea	39.25 /mh	141	8.00 /ea	96		/ea			237	301
	PVC Sch 40 Tee SxSxS 2	15211.111	10.00 ea	39.25 /mh	118	3.00 /ea	30		/ea			148	201
	PVC Sch 40 45 Ell SOCxSOC 3	15211.108	2.00 ea	39.25 /mh	24	11.00 /ea	22		/ea			46	56
	PVC Sch 40 45 Ell SOCxSOC 4	15211.108	2.00 ea	39.25 /mh	24	18.00 /ea	36		/ea			60	70
	PVC Sch 40 WYE 2" SOC	15211.113	6.00 ea	39.25 /mh	71	22.00 /ea	132		/ea			203	234
	PVC Sch 40 Coupling SOC x SOC 2	15211.104	6.00 ea	39.25 /mh	71	2.00 /ea	12		/ea			83	114
	PVC Sch 40 Adapter MIPT x Socket 2	15211.117	6.00 ea	39.25 /mh	71	2.00 /ea	12		/ea			83	114
	PVC Sch 40 WYE 4" SOC	15211.113	4.00 ea	39.25 /mh	47	70.00 /ea	280		/ea			327	348
	PVC Sch 40 Adapter Socket x FIPT 2	15211.118	6.00 ea	39.25 /mh	71	2.00 /ea	12		/ea			83	114
	PVC Sch 40 Cap Slip 2	15211.125	6.00 ea	39.25 /mh	71	2.00 /ea	12		/ea			83	114
	PVC Sch 40 Coupling SOC x SOC 3	15211.104	1.00 ea	39.25 /mh	12	5.00 /ea	5		/ea			17	22
	PVC Sch 40 Coupling SOC x SOC 4	15211.104	2.00 ea	39.25 /mh	24	7.00 /ea	14		/ea			38	48
	PVC Sch 40 Cement	15211.101	2.00 qt	/qt		61.00 /qt	134		/qt			134	134
	PVC Sch 40 Primer	15211.101	2.00 qt	/qt		43.00 /qt	95		/qt			95	95
	PVC Sch 40 Plug MIPT 2	15211.135	6.00 ea	39.25 /mh	71	3.00 /ea	18		/ea			89	120
	PVC Sch 40 Adapter Socket x FIPT 4	15211.118	1.00 ea	39.25 /mh	12	9.00 /ea	9		/ea			21	26
	PVC Sch 40 Plug MIPT 4	15211.135	1.00 ea	39.25 /mh	12	12.00 /ea	12		/ea			24	29
	PVC Sch 40 Bushing Spigot x SOC 3 x 2	15211.130	2.00 ea	39.25 /mh	24	4.00 /ea	8		/ea			32	42
	PVC Sch 40 WYE 4X4X3" S	15211.114	4.00 ea	39.25 /mh	47	75.00 /ea	300		/ea			347	368
	PVC Valve Ball True Union V/ton 2" S & T	15211.310	8.00 ea	39.25 /mh	94	106.00 /ea	848		/ea			942	985
	PS Strut SS 1-5/8 x 1-5/8 - SS304	15060.476	10.00 lf	39.25 /mh	118	15.00 /lf	150		/lf			268	321
	PS Strut Post Base SS304	15060.478	4.00 ea	39.25 /mh	47	70.00 /ea	280		/ea			327	348
	PS Pipe Strut Clamp SS 2in - SS304	15060.486	12.00 ea	39.25 /mh	141	8.50 /ea	102		/ea			243	307
	PS Expansion Anchor 1/2 x 5-1/2in EG	15060.125	16.00 ea	39.25 /mh	31	10.00 /ea	160		/ea			191	206
	PVC Valve Ball True Union V/ton 3" S	15211.310	2.00 ea	39.25 /mh	16	256.00 /ea	512		/ea			528	536
	Sleeve PVC 4" (S80)	15121.900	9.00 ea	39.25 /mh	530	75.00 /ea	675		/ea			1,205	1,443
	Sleeve PVC 6" (SDR35)	15121.900	4.00 ea	39.25 /mh	275	95.00 /ea	380		/ea			655	778
	Link Seal Size LS-300-S	15123.100	115.00 ea	39.25 /mh	677	8.50 /ea	978		/ea			1,655	1,959
	Grout Sleeve 4in	15124.300	9.00 ea	39.25 /mh	353	10.00 /ea	90		/ea			443	602
	Grout Sleeve 6in	15124.300	4.00 ea	39.25 /mh	157	15.00 /ea	60		/ea			217	288
	2"/4" Odor Control Condensate Drain Pipe		165.00 lf		5,667		6,092					11,758	14,308
	150-55 80 3" Sump Pump Discharge - Under Slab												
	PVC Sch 80 PIPE 3" PE	15211.203	20.00 lf	39.25 /mh	236	6.00 /lf	120		/lf			356	461
	PVC Sch 80 90 EL 3" S	15211.207	2.00 ea	39.25 /mh	24	9.00 /ea	18		/ea			42	52
	PVC Sch 80 45 EL 3" SOCxSOC	15211.208	1.00 ea	39.25 /mh	12	21.00 /ea	21		/ea			33	38
	PVC Sch 80 WYE 3" SOC	15211.213	1.00 ea	39.25 /mh	12	95.00 /ea	95		/ea			107	112
	PVC Sch 80 Straight CPLG 3" S	15211.204	1.00 ea	39.25 /mh	12	12.00 /ea	12		/ea			24	29
	PVC Sch 80 FEM ADPT 3" SXT	15211.218	1.00 ea	39.25 /mh	12	23.00 /ea	23		/ea			35	40
	PVC Sch 80 PLUG 3" T	15211.235	1.00 ea	39.25 /mh	12	14.00 /ea	14		/ea			26	31
	3" Sump Pump Discharge - Under Slab		20.00 lf		318		303					621	764
	PIPE Pipe				88,393		1,285,757			50,475	12,895	1,437,520	1,477,296
	27 - ODOR Odor Control				88,393		1,285,757			50,475	12,895	1,437,520	1,477,296
	467883.00 Odor Control System				88,393		1,285,757			50,475	12,895	1,437,520	1,477,296



CITY AND COUNT OF BROOMFIELD
WATER RECOVER FACILITY PHASE 1 IMPROVEMENTS
60% to GMP Cost Comparison
April 11, 2025

Description	60%**	GMP	Difference 60% to GMP	Notes
00 General Requirements	\$ 4,924,114.00	\$ 6,583,045	\$ 1,658,931.00	Added hazardous material allowance, Admin Bldg. HVAC costs, sludge hauling costs, full time QC manager, dedicated Commissioning Manager
01 Selective Alterations & Demo	\$ 1,245,225.00	\$ 3,227,123	\$ 1,981,898.00	Includes temporary facilities, erosion control and basin leakage testing. Rearrangement of Specification Sections
02 Existing Conditions	\$ 44,014.00	\$ 120,006	\$ 75,992.00	Final pricing on underground diesel storage tank removal.
03 Concrete	\$ 11,741,921.00	\$ 13,434,628	\$ 1,692,707.00	Increased length of caissons, added Biosan to concrete mix, increased concrete quantity at EQ Pump Station, increased rebar price, added concrete parapet wall to EQ Basin, added caissons to the Reuse Electrical Room
04 Masonry	\$ 1,570,360.00	\$ 1,106,365	\$ (463,995.00)	Competitive bidding for masonry, EQ Basin parapet wall was masonry
05 Metals	\$ 460,555.00	\$ 639,989	\$ 179,434.00	Finalized scope and pricing.
06 Woods, Plastics, & Composites	\$ 19,792.00	\$ 150,223	\$ 130,431.00	Added FRP cover at EQ Pump Station wetwell.
07 Thermal & Moisture Protection	\$ 300,050.00	\$ 392,765	\$ 92,715.00	Finalized scope and pricing.
08 Openings	\$ 101,229.00	\$ 100,173	\$ (1,056.00)	Finalized scope and pricing.
09 Finishes	\$ 377,850.00	\$ 807,500	\$ 429,650.00	Added coatings at PC#4 effluent troughs, Weir Structure, and EQ Pump Station.
10 Specialties	\$ 31,507.00	\$ 23,820	\$ (7,687.00)	Finalized scope and pricing.
22 Plumbing	\$ 162,524.00	\$ 217,351	\$ 54,827.00	Finalized scope and pricing.
23 HVAC	\$ 1,018,624.00	\$ 1,030,069	\$ 11,445.00	Finalized scope and pricing.
26 Electrical	\$ 8,603,629.00	\$ 7,512,417	\$ (1,091,212.00)	Competitive bidding.
31 Earthwork	\$ 3,451,900.00	\$ 4,206,893	\$ 754,993.00	Added additional micropiles at EQ Pump Station, added over excavation at Generator Slab.
32 Exterior Improvements	\$ 700,460.00	\$ 840,069	\$ 139,609.00	Landscape allowance increased by \$50k, final pricing for asphalt replacement
33 Utilities	\$ 563,903.00	\$ 395,206	\$ (168,697.00)	14" forcmain tie-in moved to Div 40
40 Process Interconnections	\$ 4,593,769.00	\$ 6,069,862	\$ 1,476,093.00	Added 14" forcemain tie-in to Division, material escalation.
41 Material Process & Handling Equip	\$ 21,000.00	\$ 186,358	\$ 165,358.00	
43 Process Gas & Liquid Handling...	\$ 2,717,604.00	\$ 2,042,740	\$ (674,864.00)	Biofilter moved from Div 43 to Div 46, increased Vertical Turbine pricing
46 Water & Wastewater Equipment	\$ 4,165,958.00	\$ 6,649,416	\$ 2,483,458.00	Increased Odor Control system price, increase FRP cover price, increased Bubble Mixing System price, Increased Clarifier Mechanism price.
Total Construction Costs	\$ 46,815,988.00	\$ 55,736,018.00	\$ 8,920,030.00	

** Includes Early Work Package Construction Costs assigned to the appropriate Division



CITY AND COUNT OF BROOMFIELD
WATER RECOVER FACILITY PHASE 1 IMPROVEMENTS
GMP - Risk Register
April 11, 2025



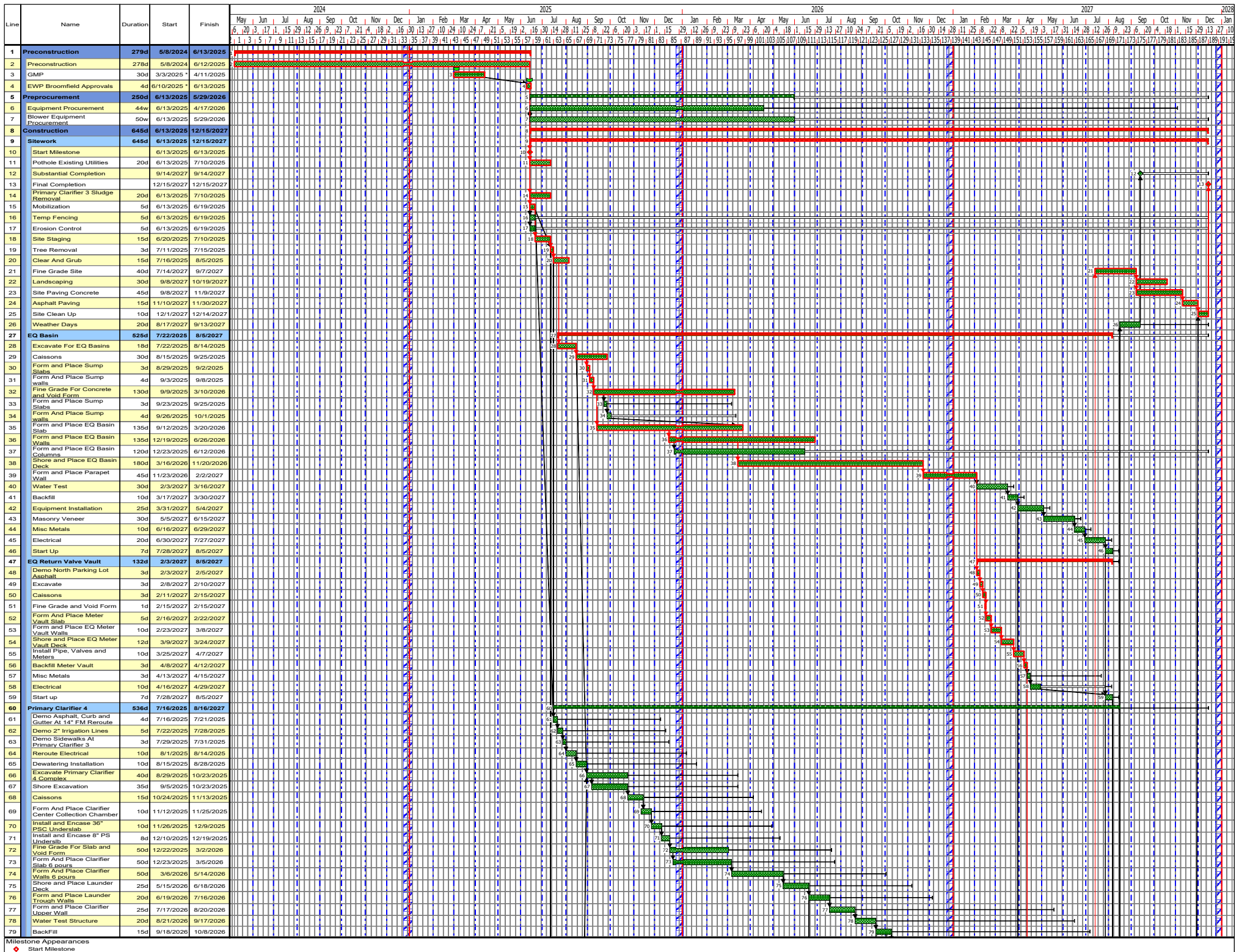
ID	Date raised	Risk description	Likelihood of the risk occurring	Impact if the risk occurs	Severity	Schedule Impact	Budget / Cost Impact	Risk Manager	Mitigating action	Contingent action	Progress on actions	Status
1	11/22/2024	Void form exposed to weather and ground water	3	3	High				Use Storm void, if possible			
2	11/22/2024	Generator and electric equipment lead times extend past our installation window and affect schedule negatively	1	1	Low				Gen 1 was repaired earlier this year, Can have one on standby for rent but costly, Open to Manufacture Options for Generator and Lead time will be a factor in selection, wait to demo existing generator until delivery date for new is confirmed			
3	11/22/2024	Primary Clarifier #2 cover damage during EQ Building Construction	1	3	Medium				Provide protection plan while constructing masonry walls, add notes to drawings			
4	11/22/2024	Heavy Traffic in front of admin during dirt haul off	3	2	High				Have street sweep available, Wednesday afternoon and Saturday are tree branch recycle days - avoid these days, add signs, coordinate with street department, possible to shut down access for short period of time, could check into sending RV Dump traffic to Westminster temporarily, look at timing of light			
5	11/22/2024	14" FM Bypass and tie in	1	3	Medium				Coordinate and communicate with City. Minimize bypass pumping time. Redundant pumps will be in place.			
6	11/22/2024	Interrupting Sludge hauling during yard pipe at main entrance road	1	2	Low				Set up separate entrance			
7	11/22/2024	Undermining existing electrical duct bank & influent pipeline	1	3	Medium				Shoring at Clarifiers			
8	11/22/2024	PDR review/approval delaying construction schedule	2	2	Medium				Coordination and Communication			Complete
9	11/22/2024	Cost overrun to maintain desired scope elements							Consider looking at (2) amendments for construction			
10	11/22/2024	Blower post 60% design details modifying cost and/or submittal data	2	1	Low				Will start Submittals at 90%, will allow for explanations around cost changes			
11	11/22/2024	Construction dewatering	3	2	High				Groundwater reports, will work with subcontractor to design robust system			
12	11/22/2024	Buried piping – unknowns, conflicts, accuracy of record/pothole information	3	3	High				Potholing,			
13	11/22/2024	Electrical duct bank reuse / condition not satisfactory	2	2	Medium				Look at inspecting early in construction process			
14	11/22/2024	Road crossing with electrical duct bank	2	2	Medium							

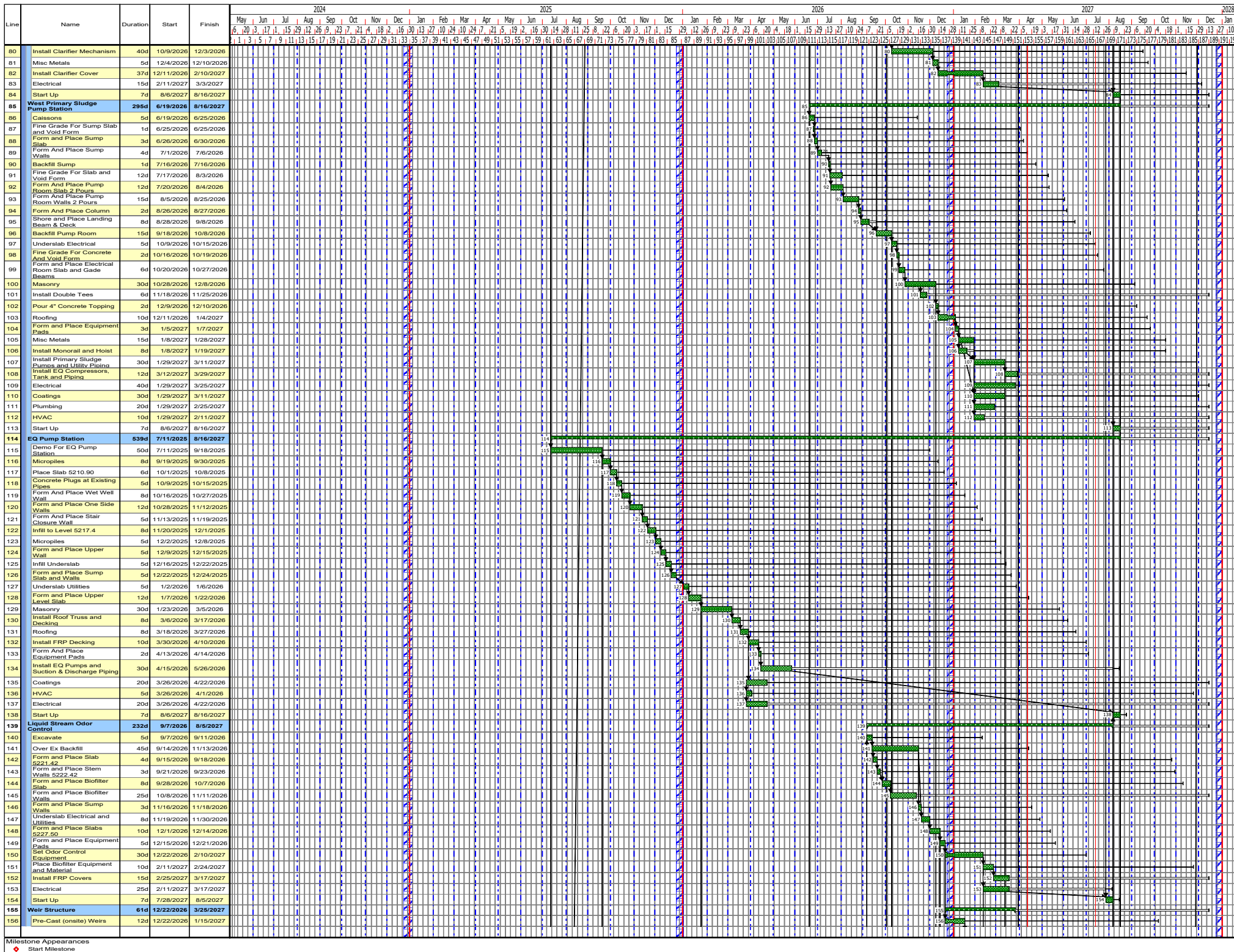


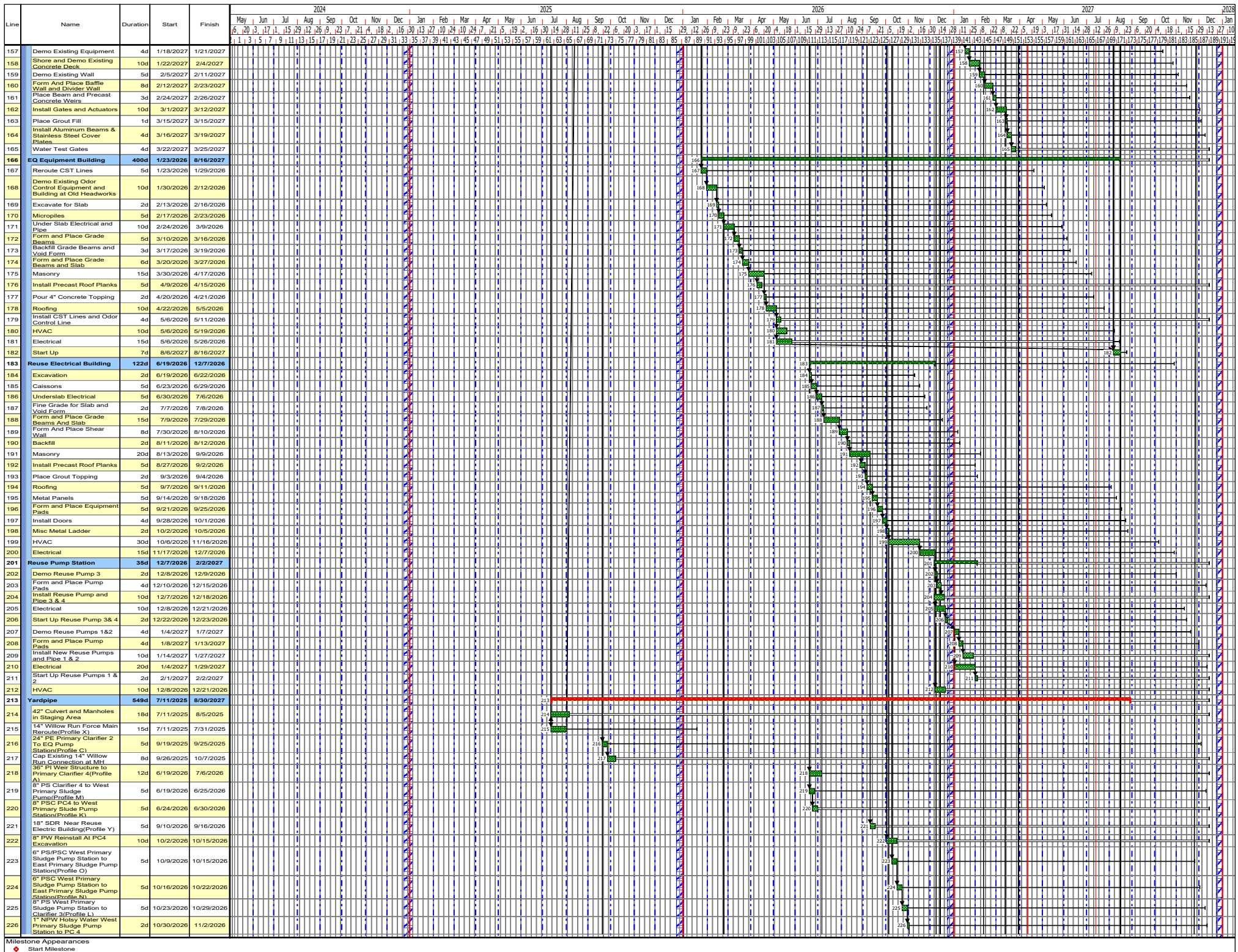
CITY AND COUNTY OF BROOMFIELD
WATER RECOVER FACILITY PHASE 1 IMPROVEMENTS
GMP - Risk Register
April 11, 2025



ID	Date raised	Risk description	Likelihood of the risk occurring	Impact if the risk occurs	Severity	Schedule Impact	Budget / Cost Impact	Risk Manager	Mitigating action	Contingent action	Progress on actions	Status
15	11/22/2024	Keeping process in service during construction – carbon feed, truck	1	2	Low				Additional entrance road?? Coordination and communication with plant staff			
16	11/22/2024	Construction challenges/unknowns in EQ Pump Station wet well area	2	1	Low				Early investigation			
17	11/22/2024	Existing concrete condition (weir structure, EQ Pump Station, Secondary Clarifiers)										
18		Demolition/excavation adjacent to existing structures/piping/duct bank	1	3	Medium				Shoring			
19	11/22/2024	Utility excavation related to West PSPS	3	2	High				Shoring			
20	11/22/2024	Stormwater piping/system reconfiguration at Reuse Pump Station Electrical Building	1	2	Low							
21	11/22/2024	Sequencing on Reuse Pump Station Electrical Building, electrical and mechanical to reduce down time for pumping	1	2	Low				Switchover sequencing plan, effective scheduling			
22	11/22/2024	Community involvement/concerns during EQ construction. Noise concerns with construction	3	2	Medium				no concrete placements before 7AM?? No heavy equipment before 7AM along north fence line			
23	11/22/2024	Trailer laydown/staging/Parking area	1	3	High							
24	1/23/2025	Management of scum/sludge during pipe tie-ins at ESPS	3	1	Medium				Install temporary tie-ins or operational changes?			
25	1/23/2025	Existing EQPS Demo - Hazardous materials (lead paint, asbestos)	2	2	Medium				Hazardous material analysis			
26	1/23/2025	Existing EQPS demo - excavation effects on existing utilities	3	2	High				Identifying utilities, excavation and shoring plan			
27	1/23/2025	North Aeration Blow/Pipe Demo - Protect existing facilities/utilities	1	3	Medium				Demo plan			
28	1/23/2025	North Aeration Blow/Pipe Demo - Use of existing hoist	1	3	Medium				Inspect, test and certify the hoist prior to use			
29	1/27/2025	Electrical Hotwork	3	3	High				MOP and communications			
30	1/27/2025	24" PE tie-in at PC#2 for EQPS - spill	1	3	Medium				MOP, bypass plan			
31	1/27/2025	36" PE tie-in to 42" - spill	1	3	Medium				MOP, bypass plan			
32	1/27/2025	Reuse PS - 8" PRV for plant process water	3	1	Medium				MOP, planning and communications			
33	1/27/2025	Reuse PS - Surge Valve Replacement - high pressure concerns	3	3	High				MOP, multiple isolation valves, communications			
	3/3/2025	Failure of PC#1 or #2 while PC #3 out of service for WPS PS construction	2	3	High				MOP			







[illegible]



C. 2025 Anticipated Aggregate Spend Agreement for Vehicle Purchases

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Action Items Item: 7C.
Presented By	
Ken Rutt, Director of Public Works	
Community Goals	

Overview

[View Correspondence](#)

[View Presentation](#)

The Fleet Division of Broomfield's Public Works Department oversees a fleet of more than 645 vehicles and follows industry-standard criteria—such as age, mileage, and repair costs—to guide vehicle replacement decisions, ensuring a balance between operational efficiency and sustainability goals. Sill Terhar Ford is the State of Colorado's designated vendor for various Ford vehicle platforms and chassis. Proposed Resolution No. 2025-08 requests approval to purchase and upfit several vehicles from Sill Terhar Ford through a cooperative procurement agreement.

Attachments

[Memo for 2025 Anticipated Aggregate Spend Agreements with Vendors for Vehicle and Equipment Purchases \(1\).pdf](#)

[Resolution No. 2025-08 \(3\).pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

Background

The Fleet Division of the Public Works Department manages the procurement and maintenance of 645 vehicles and equipment for all of the City and County of Broomfield's departments.

Fleet vehicle replacement criteria includes the age of the vehicle ranging from 5-10 years, depending on the type of vehicle and the specific operational needs, mileage, and repair cost to the value of the vehicle. For example:

- A F350 pick-up truck will meet the typical 10 year, 100,000 mile, and or 65% of the value of the vehicle spent in repair costs;
- While a Police patrol unit will likely be replaced at 5 years, 100,000, or 65% of the value of the vehicle spent in repair costs. This replacement criteria aligns with industry standards and is similar to our neighboring communities such as the City of Loveland, City of Boulder, and the City of Westminster.

Fleet Electrification and Sustainability Goals

The City of Broomfield is committed to environmental stewardship and sustainability, with a particular focus on reducing Greenhouse Gas (GHG) emissions from its municipal fleet. Through strategic planning and proactive vehicle replacement criteria, the city projects a significant 51.98% GHG reduction from its fleet vehicles by 2027. This target is a cornerstone of the Council's broader sustainability goals and dictates a thorough evaluation process for all new vehicle and equipment acquisitions.

Staff conducts a comprehensive assessment of each vehicle replacement to ensure alignment with Broomfield's environmental objectives. This evaluation prioritizes options that minimize environmental impact and align with operational needs while still contributing to overall emission reduction efforts.

Staff is continuously reviewing and adjusting as new technologies emerge and market conditions evolve, ensuring that Broomfield remains at the forefront of sustainable fleet management.

2025 Purchases

In 2025, the Fleet Division is scheduled to purchase multiple vehicles from Sill-Terhar Ford including:

- 6 replacement Police Interceptors with Hybrid Electric Vehicles (HEVs),
- 1 Ford Transit van to support the Police Department's (PD) traffic investigations unit, and
- 1 F350 dump-body truck to support Broomfield Parks Operations.

Police Interceptors have a specific need for vehicle use without interruption, the HEV meets the utilization demand of the operation while balancing the reduction of emissions. According to [Ford](#), the hybrid system can save up to 838 gallons of fuel per year, resulting in savings of approximately \$17,500 over six years, assuming the gas prices stay around \$3.50 per gallon. Broomfield's current police patrol fleet consists of 45 marked units, 20 of which are currently serving in a hybrid platform. These six additional vehicle purchases will help establish continuation of Broomfield GHG reduction goals.

Ford Transit vans are currently offered in an EV platform; however, due to the operational demands of the vehicles, multiple EVs would be needed to support the needs of the Police Department's Traffic

Investigations operations. Operational aspects include serving after hours, serving for extended hours in poor weather conditions, weekend emergencies, and travel range needs that exceed the EV platform's limited travel range (80-100 miles) that current technology allows. For these reasons, the transit van will be purchased with a gas combustion engine.

The Parks Operations replacement F350 dump-body truck is a super-duty platform to accommodate additional weight and to provide an increased towing capacity while allowing for a range of up-fit styles that in this case, include a dump body. Super-duty trucks are not currently offered in a hybrid or electric platform. Due to the operational needs, this F350 will be purchased with a diesel combustion engine.

Public Works continues to research and work with industry partners to advocate for the development of alternative fuel options for all Broomfield vehicle platforms through seats on the FleetPros National Board and memberships with organizations like Drive Clean Colorado.

[Chapter 3-20](#) of the Broomfield Municipal Code allows for the purchase of items through cooperative procurement with other organizations if the procurement process used meets or exceeds Broomfield's procurement process standards.

The 6 Police Interceptors were originally budgeted in 2024, however Ken Garff was not able to deliver the requested vehicles. Staff evaluated available options to purchase the police interceptors in 2025 and ensure a 2025 delivery. Staff found 6 Police Interceptors in Sill-Terhar inventory. To ensure 2025 delivery, staff worked with Sill-Terhar to hold the vehicles resulting in a fee of \$3,025 per vehicle to obtain the Police Interceptors for a total of \$18,150.

Sill-Terhar Ford Broomfield is the Colorado State Awarded Vendor for multiple Ford vehicle platforms and chassis. The proposed vehicle purchases meet Broomfield's specifications and purchasing requirements. The purchase of these vehicles shall be under the [State of Colorado price agreement #193824](#) at the following cost:

- Police Interceptors - 6 at \$48,475 each for a total of \$290,850.
- Police Transit Van - 1 at \$53,384
- F-350 - 1 at \$87,035

The Sill-Terhar Ford Cooperative Agreement expires September 30, 2025. These vehicles have been on order, and should Resolution No. 2025-08 be approved, staff will work diligently to take possession of the vehicles ASAP.

Staff from Public Works and Finance consistently review and monitor Colorado State Awarded Vendors to ensure fiscal obligation and vehicle purchasing decisions that provide the best value for the community of Broomfield while striving to achieve sustainability goals.

The [2025 budget](#) includes funding to purchase multiple vehicles for the following departments: Parks, Recreation and Senior Services, Police, and Public Works. The anticipated aggregate spend for Sill-Terhar includes all 2025 anticipated vehicle purchases, as well as repair parts, preventive maintenance kits such as filters, fluids and any other specific products that are sourced through Sill-Terhar Ford directly.

Proposed Resolution

Proposed Resolution No. 2025-08 would authorize the purchase of multiple vehicles from Sill-Terhar Ford, provide for the upfitting of each vehicle, and repair costs of \$791,316 and 10% contingency of \$79,131 for a total amount not to exceed of \$870,447 for 2025.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
Fund 1 (20-70101-55600), Project Code 0AZ0022	\$1,199,122
Fund 2 (20-70100-55600), Project Code 0AZ0443	\$104,294
Fund 3 (01-30200-52720), Project Code XFL0002	\$22,939
	\$1,326,355
Fund 1: 20-70101-55600, Project Code 0AZ0022 - 6 PD Interceptors	-\$290,850
Fund 1: 20-70101-55600, Project Code 0AZ0022 - Delivery Guarantee Holding Fee (6 PD Interceptors)	-\$18,150
Fund 1: 20-70101-55600, Project Code 0AZ0022 - One Police Transit Van	-\$53,384
Fund 1: 20-70101-55600, Project Code 0AZ0022 - One Parks F-350	-\$87,035
Fund 1: Emergency Vehicle Replacement	-\$231,603
Fund 2: 20-70100-55600, Project Code 0AZ0443 -Upfitting PD Vans	-\$47,737
Fund 2: Vehicle and Equipment Vendor Repair (i.e., transmission, major engine repairs)	-\$56,557
Fund 3: 01-30200-52720 Repair Parts, Preventive Maintenance Kits	-\$6,000
10% Contingency	-\$79,131
Projected Balance	\$455,908

Prior Council or Other Entity Actions

[Proposed Resolution No. 2023-129 and 2023-130, Authorizing and Approving the Annual Aggregate Spend for 2024 Vehicle Purchases](#)

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to authorize the purchase, the appropriate motion is...

That Resolution 2025-08 be adopted.

Alternatives

Do not purchase any new or replacement vehicles from Sill-Terhar Ford in 2025.

RESOLUTION NO. 2025-08

A resolution for Anticipated Aggregate Spend Agreement with Sill-Terhar for Vehicle Purchases

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The City and County Manager is authorized to approve purchase orders that would allow the purchase of multiple vehicles in the amount of \$791,316 from Sill-Terhar Ford.

Section 2.

The City and County Manager is authorized to approve additional charges in an aggregate amount not to exceed 10 percent of the total anticipated vehicle amount, which is \$79,131, for a total not to exceed \$870,447 subject to budget limitations.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City and County of Broomfield

City Council Regular Meeting

D. 2025 Large Equipment Purchases

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Action Items Item: 7D.
Presented By	
Ken Rutt, Director of Public Works	
Community Goals	

Overview

[View Correspondence](#)

[View Presentation](#)

The Fleet Division oversees the maintenance and replacement of Broomfield's mobile assets, including large construction equipment. For 2025, a diesel-powered Tier 4 front-end loader with a tree spade attachment will be purchased for the Parks Department, saving an estimated \$153,418 by enabling in-house tree transplanting previously contracted out. This purchase will be made through a cooperative Sourcewell contract as authorized by Proposed Resolution No. 2025-07.

Attachments

[Memo for 2025 Large Equipment Purchases \(1\).pdf](#)

[Resolution No. 2025-07 \(2\).pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

Background

The Fleet Division of the Public Works Department manages the procurement of vehicles and equipment for all of Broomfield's departments, as well as maintenance and repairs for all 645 of Broomfield's current mobile assets, 23 of which are large off-road construction equipment.

The decision to replace a vehicle or piece of equipment is based on a number of factors, including repair costs, years of service, availability of repair parts, overall physical condition, and reliability.

[The 2025 budget](#) includes funding to purchase one replacement front-end loader for the Parks, Recreation, and Senior Services Department. Specifications were developed based on Broomfield's operational needs.

Evaluation of Electric Vehicle (EV) Construction Equipment for Broomfield Operations

In our ongoing commitment to sustainability and operational efficiency, a comprehensive evaluation was conducted to assess the feasibility of integrating Electric Vehicle (EV) construction equipment into Broomfield's fleet. The primary manufacturers of EV construction equipment, [Volvo](#), [John Deere](#), and [Caterpillar](#), were thoroughly reviewed for potential options to replace our existing equipment with full electric platforms in alignment with the Council's goals.

Staff completed a detailed search and analysis focused on the availability of EV front-end loaders that could meet Broomfield's specific size and drivetrain specifications. These specifications are crucial for ensuring that any new equipment can effectively fulfill our diverse operational requirements across various departments and projects.

Currently, none of the EV front-end loader models offered by Volvo, John Deere, or Caterpillar presently meet the necessary size or drivetrain specifications. This limitation poses a significant challenge to a direct, full electric replacement of our current heavy equipment. The operational demands of Broomfield necessitate machinery capable of handling substantial loads, extended operational durations, and specific terrain conditions, which the current EV offerings in these categories do not fully accommodate.

Staff is continuing to monitor advancements in EV construction equipment technology and will consistently revisit this evaluation as new models and capabilities become available from these and other manufacturers. Our aim remains to transition to more sustainable equipment solutions as soon as technologically viable options align with our operational needs.

Equipment Replacement Overview

The current Parks front-end loader is 13 years old and has accumulated 5,100 hours. The Parks' loader serves Broomfield's tree recycling center and provides the Division as a resource to move dirt, debris, fertilizer, and top dressing material for athletic fields.

The replacement loader will be equipped with a tree spade attachment for a cost of \$100,582 that will allow the capability to transplant trees with a 10" trunk diameter and 25' in height throughout the City and County infrastructure. This will result in substantial cost savings as Broomfield does not have a tree spade, and this resource has to be provided by an outside contractor. The current estimated cost for transplanting a tree with a certified contractor is \$5,400. Broomfield Parks Division expects to move at least 50 trees out of Community Park before the Broomfield Town Square project begins, which contractually would cost



\$270,000. With this purchase, including staff labor costs, it is estimated to save Broomfield \$153,418.

The replacement front-end loader is diesel-powered and equipped with Tier 4 emissions standards. Tier 4 standards require that emissions of Particulate Matter (PM) and Nitrogen oxides (NOx) be further reduced by about 90% from previous Tier 2 and 3 emissions requirements. These emission reductions have been achieved through the use of advanced exhaust gas after-treatment technologies, with most Tier 4 engine families using urea-SCR catalysts or diesel particulate filters for NOx control.

[Chapter 3-20](#) of the Broomfield Municipal Code allows for the purchase of items through cooperative procurement with other organizations if the procurement process used meets or exceeds Broomfield's procurement process standards.

Sourcewell Cooperative Purchasing prepares specifications and requests bids for vehicles and equipment. Sourcewell's procurement process meets Broomfield's procurement process standards. The purchase of the front end loader shall be under [Sourcewell's agreement #011723-JDC with John Deere](#), through the authorized reseller 4 Rivers Equipment.

Proposed Resolution

Proposed Resolution No. 2025-07 would authorize:

- The purchase of a front-end loader from 4 Rivers Equipment in the amount of \$385,875, as evidenced through the [John Deere quote](#).

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
Fund 1 (20-70101-55600), Project Code 0AZ0022	\$1,199,122
	\$1,199,122
Fund 1 (20-70101-55600), Project Code 0AZ0022 - Parks Front End Loader	-\$385,875
Projected Balance	\$813,247

Prior Council or Other Entity Actions

- [Resolution 2024-149 Adopting the Budget for the City and County of Broomfield for the Fiscal Year 2025 and Appropriating Sums of Money](#)

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to authorize the purchase, the appropriate motion is...
That Resolution 2025-07 be adopted.

Alternatives

Do not purchase the proposed replacement equipment in 2025.

RESOLUTION NO. 2025-07

A resolution authorizing and approving a Large Equipment Purchase for the Parks Department.

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The City and County Manager is authorized to approve purchase orders that would allow the purchase of a front-end loader from 4 Rivers Equipment in the amount of \$385,875

Section 2.

This resolution is effective upon its approval by the City Council.

Approved on July 22, 2025

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City and County of Broomfield

City Council Regular Meeting

E. Medium Density Residential Zone District Updates Ordinance - First Reading

Meeting	Agenda Group
Tuesday, July 22, 2025, 6:00 PM	Action Items Item: 7E.
Presented By	
Lynn Merwin	
Community Goals	
☒ Thriving, Diverse, Safe and Welcoming Community	

Overview

[View Correspondence](#) and visit [BroomfieldVoice.com](https://broomfieldvoice.com)

[View Presentation](#)

Proposed Ordinance No. 2275 would amend Title 17, Zoning, of the Broomfield Municipal Code related to development standards for medium to high density residential development. If approved on first reading, proposed Ordinance No. 2275 will be published in full, and a public hearing will be scheduled for August 12, 2025.

Attachments

[Ordinance No. 2275 Medium to High Density Residential Code Updates Memo First Reading.pdf](#)

[Ordinance No. 2275 Medium-Low to High Density Residential Zone Districts Updates.pdf](#)

Summary

[View Correspondence](#)

[View Presentation](#)

[View Broomfield Voice Page](#)

Proposed Ordinance No. 2275 would amend Title 17, Zoning, of the Broomfield Municipal Code related to development standards for medium to high density residential development. If approved on first reading, proposed Ordinance No. 2275 will be published in full, and a public hearing will be scheduled for August 12, 2025. The intent is to modernize the development standards in the existing R-3 and R-5 districts and create a new R-7 district for potential future higher-density residential housing.

On [January 16, 2024](#), a session was held outlining options for revising the residential development regulations in the Broomfield Municipal Code. During this study session, Council indicated support for modernizing Broomfield's residential zoning regulations to promote housing diversity through a more streamlined review process than developers typically experience through the PUD zoning development review process.

At the [March 18, 2025](#) study session, staff presented opportunities for updating the existing zoning code to support more diversity in housing options by updating and modernizing the R-3 and R-5 zone districts, creating a new R-7 zone district, and removing the medium-density residential standards from the PUD zone district. At this meeting City Council directed staff to move forward with the proposal with an increased height within the proposed R-7 district.

Updating the standards of the R-3 and R-5 districts would bring the established setbacks, density, and other lot requirements in line with more modern development regulations. These zone districts are seldom used by developers currently, as the established standards are not supportive of constructing successful projects. Modernizing these regulations is intended to provide a more realistic path for developers or residents to utilize these Euclidean districts to build more middle housing (slightly higher densities to promote housing diversity), income-aligned housing, and starter housing. Creating a new R-7 district would create a more streamlined pathway for higher-density residential development to occur, provided they follow Broomfield's development standards and site plan review process.

The proposed amendments to the code will also include an update to the development standards for the Planned Unit Development (PUD) zone district. The PUD zone district is a custom zoning that allows greater flexibility as the permitted uses, setbacks, building height, and other requirements are established in specific, defined areas through the development review process, which includes public hearings. The PUD zone district, as currently written, has established development standards for medium-density residential development, including minimum lot size, setbacks, building height, and frontage. These standards are not in line with current medium-density residential development and are frequently deviated from as part of the PUD and/or Site Development Plan (SDP) process.

As drafted, the potential updates would not apply to properties zoned PUD with existing development standards established through an approved PUD plan for the neighborhood. Examples of these neighborhoods include Anthem, Wildgrass, Westlake, Lac Amora, The Broadlands, and Redleaf. If Broomfield proceeds with creating a new R-7 zone district, rezoning properties to this district would be considered on a case-by-case basis and would follow the standard rezoning process, which includes a neighborhood meeting and public hearings. Similarly, property owners would continue to be able to propose to rezone their properties to an alternative existing, amended, or new zone district, which would require advance notice to adjacent property owners and public hearings with a final decision made by City Council.

Additionally, a minor update is proposed to the supplementary regulations section of the Broomfield Municipal Code. This update will remove the current requirement for a street frontage of 40', which is not compatible with townhomes and smaller lot residential. This update will additionally clarify that development is not permitted within easements unless written permission is provided from the easement grantee, and all sight distance, corner clearance, and driveway spacing should meet Broomfield Engineering Standards and Specifications.

Financial Considerations

There has been no financial impact associated with the development of this code, as it was drafted by staff without the use of external consultants. Should the proposed amendments to the code be approved, there may be limited cost savings for the City and County of Broomfield associated with the reduced staff time for processing required for residential development proposals.

There may be indirect financial impacts to developers or homeowners that may result from the proposed changes to the municipal code. Individual property owners may seek to rezone their properties to develop middle or high-density housing. Additionally, developers may pursue more infill and greenfield development of middle-density residential. These property owner-driven changes and zoning changes would result in an increase in fees collected through the permitting process. These fees from an increase in proposed development projects would be one-time revenues, and would not increase or change overall development fiscal outcomes from residential development, which generally has a net negative financial impact on the long range financial plan. Residential uses, while vital to the needs of the community, are not an annual net revenue driver for Broomfield.

Prior Council or Other Entity Actions

- [January 16, 2024](#) - Study session outlining options for revising the residential development regulations in the Broomfield Municipal Code. Council indicated support for modernizing Broomfield's residential zoning regulations to promote housing diversity through a more streamlined review process.
- [March 18, 2025](#) - Study session was held with City Council to discuss staff's proposed recommendations to update the medium to high density residential zone districts and PUD district. City Council directed staff to move forward with the proposed amendments with one revision to increase the permitted height within the proposed R-7 district.

Boards and Commissions Prior Actions and Recommendations

Broomfield Housing Alliance - Staff presented the proposal to the Broomfield Housing Alliance Board on April 23, 2025. The board has provided the following statement on the project: "The BHA Board of Commissioners supports the proposed changes to the Broomfield Residential Zoning Code as an opportunity to facilitate and promote the development of affordable housing that meets the diverse needs of the Broomfield community."

Open Space and Trails Advisory Committee - The proposed code changes were presented to the Open Space and Trails Advisory Committee (OSTAC) on April 24, 2025. OSTAC asked clarifying questions on the proposal and was supportive of the request.

Land Use Review Commission - Staff presented the proposal to the Land Use Review Commission (LURC) on April 28, 2025. LURC asked staff a number of questions on the proposal, generally related to the potential increase in density, building heights and the reduction of on-site open area. One commissioner did identify concerns with the construction of denser residential development within Broomfield. A formal vote was not held on the proposal, and information was provided to the commission on how to provide additional feedback on the updates through the public hearing process to consider the proposed ordinance.

Proposed Actions / Recommendations

Should Council wish to adopt the changes set forth in the proposed ordinance, the appropriate motion is...

That Ordinance No. 2275 be adopted on first reading and ordered published in full;

That a public hearing and second reading of the Ordinance be held on August 12, 2025, at 6:00 pm as allowed by City Council Procedures and Rules of Order.

Alternatives

- Make no changes to the B.M.C. at this time.
- Make changes to the Broomfield Municipal Code as directed by City Council.

Background

Broomfield's zoning regulations are set forth in Title 17 of the Broomfield Municipal Code and were originally adopted in 1973 as part of Ordinance No. 149. The ordinance established a combination of Euclidean zoning (typically one category of use per zone district) and planned unit development districts (custom-developed zoning allowing greater flexibility but a more rigorous review process). Euclidean zoning districts include Broomfield's primary residential zone districts, R-1 Low-Density Residential, R-3 Medium-Density Residential, and R-5 High-Density Residential. Broomfield also has Estate, Rural Residential, and Agricultural zone districts which are specifically intended for larger size lots with a more rural character.

Since the creation of the residential districts in 1973, few significant updates have been made. Euclidean zoning is used by many municipalities due to its ease of implementation, long-established legal precedent, and familiarity to planners and land use development professionals. However, Euclidean zoning often lacks flexibility and, when not regularly updated, can become outdated and difficult to apply.

In response to Euclidean zoning, many communities, including Broomfield, have also incorporated Planned Unit Development (PUD) zoning into their municipal zoning codes. PUD zoning is a type of flexible and inclusionary zoning (non-Euclidean zoning) that allows a mix of land uses and varied development standards within a designated land area subject to consideration and approval through a public hearing process. PUD-zoned lands require PUD plans and site development plans (SDPs) and encourage innovations in design such as clustering of residences, conservation of open areas, allowing mixed-use housing and land uses, promoting a more efficient use of land, reducing infrastructure needs, promoting environmental preservation and sustainability, and allowing general development flexibility.

Though PUD zoning can be beneficial by allowing flexible and unique development proposals, in many cases, this zoning can also be cost-prohibitive and heavily favor large-scale developers building on larger parcels. PUD zoning requires that the applicant follow a more complex development review and approval process, including subjective reviews due to their flexibility, which can deter applicants with less financial capital. Broomfield's PUD zone district has uniform standards for residential development intended to guide developers. These PUD standards have resulted in numerous variance requests over the decades as developers have sought greater flexibility or zoning customization, such as reduced minimum setbacks, to respond to market conditions. While the PUD development review process provides an opportunity for greater customization, the lack of certainty through this review process also adds greater financial uncertainty for the applicant and adjacent property owners.

Broomfield Comprehensive Plan

The 2016 Broomfield Comprehensive Plan encourages development of “a range of housing options that will meet both current and future residents’ changing needs and conditions, and that support the community.”

Some of the goals, policies, and action steps from the Comprehensive Plan include:

Goal HO-B: Maintaining Housing Affordability/Attainability, Encourage an adequate supply of affordable/attainable housing for lower-income households.

Policy HO-B.1: Plan for future affordable/attainable housing that meets the needs for the workforce and special populations.

Action Step HO-B.1.3: Identify possible regulatory modifications that may be appropriate to promote attainable, sustainable and quality housing for lower-income households. This may include evaluating residential design standards, review procedures, permit fees, density requirements, inclusionary and restricted housing, etc.

Goal HO-C: Diversity of Housing Types and Ownership Options, Encourage a diversity of populations within developed areas by providing a variety of housing types that serve a broad spectrum of households.

Policy HO-C.2 Promote a diversity of housing types, styles, and price points within individual neighborhoods to accommodate a range of affordability.

Action Step HO-C.2.1: Evaluate and establish potential locations for different housing types to provide a full spectrum of housing options.

Action Step HO-C.2.2: Identify potential gaps in the current and projected housing supply, and develop and consider programs to address these gaps.

Existing Conditions

When Broomfield’s zoning ordinance was first created in 1973, the social and economic conditions within the City and County of Broomfield and across the country differed from today. At that time, low-density single-unit development was the predominant residential land use type in suburban communities and was financially feasible for many Americans. As housing development has been unable to keep up with the growing demand for housing, many of these single-unit neighborhoods have since become unaffordable and exclusionary to potential residents.

Across the country and the state, communities are considering updates to residential development requirements to incentivize sustainable growth and development patterns, and income-aligned housing options. The intent of these efforts is to help communities align policies and regulations to focus on locating various types of housing in locations near jobs, transit, and services, and to ensure a mix of housing types and price points throughout a community. Several organizations have put out guiding documents, such as the [housing supply accelerator handbook](#) and the [zoning reform toolkit](#), to help municipalities navigate code updates to help facilitate the construction of diverse housing options.

Based on Broomfield’s September 2023 [Housing Needs Assessment](#), housing prices within the City and County of Broomfield have steadily increased over the past decade, resulting in a significant number of cost-burdened households. Cost-burdened means that a household is spending more than 30% of its household income on housing. In 2021, 45% of all renters in Broomfield were cost-burdened, with 20% being severely

cost-burdened. Those who face a severe cost burden are considered at-risk for homelessness from eviction or foreclosure. The assessment also identified that in 2021, there was a 1,662-unit shortage of rental units for households earning less than \$50,000 per year.

Currently, the majority of residential land area developed within Broomfield is zoned either R-1 or PUD, allowing the construction of one single-unit dwelling per lot or requiring an expensive and lengthy development review process for higher-density proposals. The existing higher-density zone districts, R-3 and R-5, currently apply to approximately 53 acres (approximately 746 units) within Broomfield, as shown in this [zoning map](#). These zone districts are rarely utilized for development due to the established standards being out of date and overly restrictive. In the existing districts, updates to the required density, setbacks, lot standards, and permitted uses are proposed. These standards are intended to encourage the use of Broomfield's Euclidean zoning districts for future development and redevelopment proposals to support the development of missing middle housing, which is identified as a need in Broomfield.

Proposed Updates

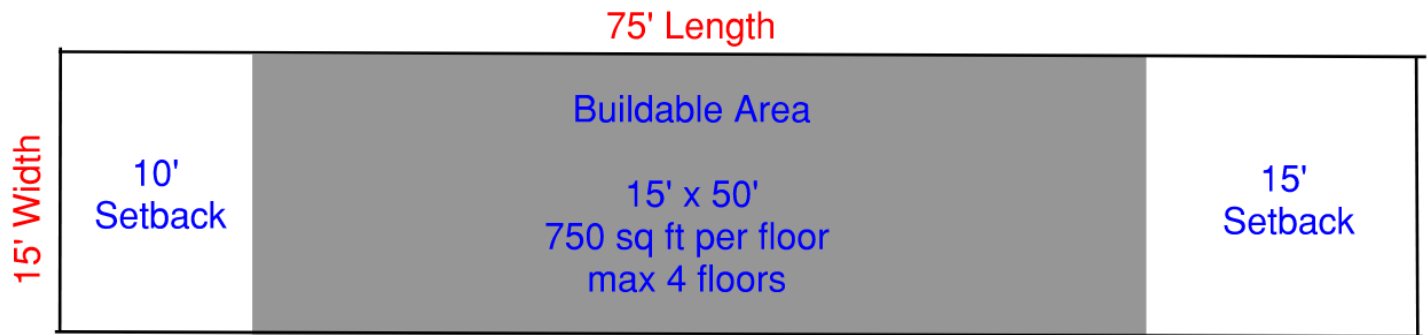
Ordinance No. 2275 includes revisions to the R-3, R-5, and PUD districts as well as the establishment of a new high-density R-7 district. The ordinance has been drafted based on staff's review of recently approved projects within the City and County of Broomfield, national and local best practices, and codes from existing communities. The proposed code amendments have been reviewed by internal and external reviewers, such as traffic, building, engineering, and the North Metro Fire Rescue District, to ensure there are no conflicts with the International Building Code, fire codes, or other construction regulations. Before any construction may occur within Broomfield, applicants must receive approval through the building permit and construction drawing process. If necessary, staff may request additional reports such as a traffic report, utility report, or drainage report through this process to thoroughly review potential impacts of development proposals.

R-3 District

The existing R-3 medium-density residential district is proposed to be renamed the "medium-low density residential district" and updated with modernized development standards to allow townhomes, small lot single-unit, and smaller scale multi-unit proposals as shown in the example images below. Uses within this zone district will be updated to specify that townhouses, duplexes, triplexes, and other multi-unit developments are permitted. Private open area requirements are proposed to be reduced from 40% of the site to 25%. The onsite open area requirements are considered separate and distinct from requirements for new residential development to provide a public land dedication and/or cash-in-lieu fee.



Examples of Developments Permitted Under Updated R-3 Code (Townhomes Left, Quadplex Right)



R-3 Townhome lot example

Example of Proposed Smallest Townhome Lot Permitted Under Updated R-3 Code - Front is to Left

Based on recent development approvals, staff is proposing a reduction in setbacks and lot standards for single-unit, duplexes, triplexes, and townhome developments. A separate development standards table will be established for multi-unit developments and non-residential uses which require a larger lot and increased buffer from neighboring properties. Height throughout the district has been increased from two to four stories, or fifty feet, including rooftop access points to accommodate townhomes. This update will provide opportunities for more housing variety and a moderate increase in density from a maximum of 10 units per acre to a maximum of 20 units per acre.

Comparison of Existing vs Proposed Minimum Lot and Yard Standards for R-3 District

	Area	Front	Rear	Side Yard	Lot Depth	Lot Width	Maximum Height	Density
Existing	8,000 sf One-unit dwellings and multi-unit dwellings 2 acres for schools / churches	25'	20'	10' for residential uses 25' for other uses	100'	75' interior lot 85' corner lot	30'	10 du / acre
Proposed - Single unit, Duplexes, Triplexes, Townhomes on Individual Lots	1,125 sf	10'	15'	5' for detached or end units 0' for attached	75'	15' interior lot 40' corner lot	45'(2)	20 du / acre
Proposed - Multi-unit and Nonresidential Uses (1)	10,000 sf 2 acres for schools / churches	10'	20'	20'	N/A	N/A	45'(2)	20 du / acre

(1) Permitted nonresidential use by rights within the R-3 zone district includes religious facilities, public and private recreational areas, public and private schools, home occupations, and accessory buildings. Additional uses such as child day cares, mobile home communities, and municipal facilities require approval through a Use by Special Review process.

(2) Maximum height for buildings adjacent to R-1 zoned residential properties shall be limited to a maximum height of 35 feet within thirty feet of the shared property line. The maximum height may be increased to 50 feet when further than 35' from the shared property line.

Examples of existing residential areas that represent the proposed R-3 zone district updates include the Skyestone Cottages, Brownstones at Palisade Park, Baseline East Village, and The Village at the Broadlands condominiums.

Allowing these updates to the R-3 zone district is expected to make small-scale developments more feasible for smaller developers and/or existing homeowners interested in incorporating updates to existing homes to accommodate additional units and housing diversity. These changes are intended to provide additional housing stock and may also build ownership opportunities. These duplex, triplex, and quadplex units are often attractive to first-time buyers, low-income families, or empty nesters interested in downsizing.

As noted on the [R-3/R-5 zoning map](#), there are limited properties where these updated standards would take effect. The impacted properties are currently developed with residential condominiums and therefore are not anticipated to be redeveloped, and the new standards are not expected to create non-conforming zoning issues for the existing uses or buildings. It would be expected that individual property owners may seek to rezone to the R-3 district if the standards are updated, and each request for a rezoning would need to be considered through the standard rezoning process. No change is proposed to the development process required for development or redevelopment of R-3 zoned properties. Development within R-3 properties follows an administrative review process.

R-5 District

The existing R-5 High-Density Residential district is proposed to be renamed the “medium-high density residential district” and updated with standards to accommodate neighborhood-scale multi-unit developments, including affordable development proposals.



Example of Development that could be Permitted Under Updated R-5 Code vs a PUD Process (Grove at Cottonwood)

The proposed updates include modifications to the permitted uses within the district as well as the specific development standards. The R-5 district currently only permits a maximum of 20 dwelling units per acre, which the proposed ordinance would revise to 30 du/ac to allow for a moderate increase in density. The proposal also includes a revision to the maximum height from two stories to four stories or fifty feet. Maximum height for buildings adjacent to R-1 zoned residential properties subdivision shall be limited to a maximum height of thirty-five feet within thirty feet of the shared property line. This buffer area has been proposed due to the additional height limitations for single-unit homes within the Broomfield Heights neighborhood plan. The buffer will require a lower building height of 35 feet immediately adjacent to the one-story home(s) to reduce the impact of adjacent developments and would allow a “step up” in building height with a greater setback.

The required on-site private open area is proposed to be reduced from 40% of the site to 15%. This reduction will allow for the construction of a greater number of units and will be less cost-restrictive for property

owners or developers seeking to invest in their properties. Public land dedication requirements will still be applicable.

Comparison of Existing vs Proposed Minimum Lot and Yard Standards for the R-5 District

	Area	Front	Rear	Side Yard	Lot Depth	Lot Width	Maximum Height	Maximum Density
Existing	10,000 One-unit dwellings and multi-unit dwellings 2 acres for churches 20,000 sf other nonresidential	25'	20'	10' for residential uses 25' for other principal buildings	100'	100'	30'	20 du / acre
Proposed	10,000 sf Multi-unit dwellings 2 acres for schools and churches 20,000 sf other nonresidential (1)	10'	20'	10' for residential uses 25' for other permitted principal buildings	100'	100'	35 - 50'(2)	30 du / acre

(1) Permitted nonresidential uses by right within the R-5 district include public and private recreational areas, religious facilities, public and private schools and child day care facilities. Several additional nonresidential uses are currently permitted through the use by Special Review process, including colleges and universities, medical and dental clinics, offices, municipal buildings and child day care facilities.

(2) Maximum height for buildings adjacent to R-1 zoned residential properties shall be limited to a maximum height of 35 feet within thirty feet of the shared property line. The maximum height may be increased to 50 feet when further than 35' from the shared property line.

Examples of existing residential areas that represent the proposed R-5 zone district updates include The Grove at Cottonwood, Retreat at Flatirons, Vista Highlands East, and the Ridge at Broomfield.

As noted on the [R-3/R-5 zoning map](#), there are limited properties that are currently zoned R-5 where these updated standards would take effect without a rezoning. The impacted properties are currently developed with apartments, a school, a church, an office, and single-unit and multi-unit developments. The proposed modification to the standards is not anticipated to create any non-conforming uses. The development standards are not expected to drive significant redevelopment of these existing sites. Instead, it would be expected that individual property owners may seek to rezone to the R-5 district if the standards are updated and each request for a rezoning would need to be considered through the standard rezoning process. No change is proposed to the development process required for the development or redevelopment of R-5

zoned properties. Development within R-5 zoned properties follows an administrative review process.

New R-7 District

A new R-7 “high-density residential district” is proposed to allow multi-unit buildings similar to those seen in areas of Broomfield such as Parkway Circle, Arista, and Highlands. This district would allow a maximum density of 80 units per acre. This zone district is proposed to allow a maximum height of 80 feet and would require a minimum of 15% of the land area to be private open area. Proposals exceeding 80 du/ac or 80' in maximum height would require approval through the Use by Special Review process. As this zone district would be new to the Broomfield Municipal Code, any property owners/developers looking to utilize this district will need to go through a rezoning process. Additionally, during the March 2025 study session, Council provided direction to staff outlining the desire for R-7 zoned properties to require site development plan approval prior to the issuance of any building permits. As such, staff is has included this provision in the proposed ordinance.



Example of Development Permitted Under the Proposed New R-7 Code - Vista Highlands West

Proposed Minimum Lot and Yard Standards for a New R-7 District

	Area	Front	Rear	Side Yard	Rear and Side Yard when adjacent to A, E-1, E-2, R-1, or PUD districts with Single Unit Residential	Maximum Height	Maximum Density
Proposed	10,000 sf Multi-unit dwellings 20,000 sf other non-Residential (1)	25' to parking lots (driveways not included) 15' to building	20'	10'	50' to parking and building	80'	80 du / acre

(1) Permitted nonresidential uses within the R-7 district as currently proposed include nursing homes and senior living facilities, child day care facilities, and public and private recreational areas. Several additional nonresidential uses may be proposed through the use by Special Review process including medical and dental clinics, offices, municipal buildings and child day care facilities.

PUD District

Although the Municipal Code includes Uniform Standards for residential development in PUD zones, the last subdivisions to utilize the Uniform Standards for residential PUD plans were Wildgrass and portions of the Anthem neighborhoods (approved more than 15 years ago). Recent developments like North Park (Baseline), Dillon Pointe, Great Western Park, and The Ridge at Broomfield have all requested and received approval for variances from the uniform standards. Since residential developments in the PUD zone district almost always seek variances from the Uniform Standards for residential PUD plans, staff is recommending that this section of the code be deleted.

Broomfield amended the BMC in 1997 to establish uniform standards for PUDs for low-and medium-density districts to allow certain flexibility in the PUD development area while ensuring the density and housing types would remain relatively stable and consistent across the community. While well-intentioned for the community and development at the time, these standards have become too rigid for development preferences seen in more recent times. As such, the Uniform Standards have created greater development uncertainty and challenges for the development community as they have desired small lots and therefore needed variances to allow this denser development. At this time, the Uniform Standards appear to conflict with the intent of PUD zoning and its being customizable to encourage innovation in development with greater variety in type, design, and layout of buildings.

When new PUD plans are submitted in the future under the amended code, instead of comparing the proposed development standards for residential development to the uniform standards, staff will provide a comparison to other Broomfield zone districts as applicable (R-1, R-3, B-1, etc). Since no recent PUDs have utilized the uniform standards, this change is not anticipated to impact future PUD proposals, but it will remove a section of the code that has become outdated because it no longer aligns with desired densities or anticipated development standards.

The proposed changes would have no impact on existing residential development within PUD districts. The PUD plans approved for existing development will not be impacted. Existing neighborhoods, such as Anthem, Baseline, Red Leaf, Westlake, Highlands, and The Broadlands, have development standards incorporated into the individual PUD plan for each neighborhood and will remain in place as approved.

Supplemental Regulations

Minor updates to the supplemental regulations chapter 17-34 of the Broomfield Municipal Code have been proposed in order to support residential development and clarify requirements. Currently, the code has a requirement stating that no lot shall have a front lot line or street frontage of less than forty feet. This code section is preventative of small lot residential development, such as Cottage cluster or townhomes. Staff has proposed that this requirement be stricken from the code.

Additionally, staff has proposed adding a clarifying statement to the code that reads as follows “no structures may be constructed within easements without written approval from the easement grantee. All sight distance, corner clearance, and driveway spacing should meet Broomfield Engineering Standards and Specifications.” While it is already internal policy that these requirements are met, adding this language to the code will help to clarify development standards to potential applicants.

Public Engagement

A [Broomfield Voice page](#) was created, which outlines the proposed changes to the Broomfield Municipal Code. This page outlines the proposed hearing schedule and neighborhood meeting information. Staff has received comments on this webpage, which have been added to the [correspondence folder](#) for this agenda item. Staff offered and participated in multiple engagement meetings with boards and commissions, adjacent neighbors, and the Broomfield Housing Alliance as discussed below.

Neighborhood Meetings - One virtual and one in-person neighborhood meeting was held to discuss the proposed code updates with the public. These meeting dates were advertised on the Broomfield Voice and through the Community Update. Additionally, mail notices were sent to property owners and current residents within 1,000 feet of any properties currently zoned R-3 or R-5. Seven residents attended the virtual meeting, and four residents attended the in-person meeting. Notes on the neighborhood meetings have been added to the [correspondence folder](#), and a summary of discussion points and neighbor concerns are listed below:

- Impacts to properties currently zoned R-3 and R-5 and potential redevelopment - At this time, none of the existing properties zoned R-3 and R-5 have indicated to staff that they are interested in pursuing redevelopment or adding additional units. If the property owners/developers of these properties are interested in future redevelopment, they will be subject to the standards of the applicable updated zone districts. These developments will also be required to meet other code requirements related to parking, stormwater detention, fire codes, etc. Any changes to these properties will require a building permit and construction document review through the building and engineering divisions, respectively.
- Impacts to Interlocken area - At this time, staff has not received any indication that any of the parcels within the Interlocken PUD Plan area will be proposed for rezoning to one of the Euclidean residential zone districts. The Interlocken PUD plan currently establishes its own standards for building height, design, permitted uses, etc. A property owner/future developer could propose either a rezoning to one of the new or updated zone districts or could propose an amendment to the existing approved PUD plan for the property to allow a more varied or dense residential development if desired. The rezoning or PUD amendment would both require public hearings, and a final decision regarding the application would be made by city council
- Height restriction based on elevation rather than maximum height - One resident suggested exploring the use of an elevation-based height restriction rather than a standard building height. Staff reviewed this suggestion and ultimately did not decide to move forward with this proposal to council due to its subjective nature as viewplanes change from different points in the community, as well as its complexity in enforcement.

Broomfield Housing Alliance - Staff presented the proposal to the Broomfield Housing Alliance Board on April 23, 2025. The board has provided the following statement on the project: “The BHA Board of Commissioners supports the proposed changes to the Broomfield Residential Zoning Code as an opportunity to facilitate and promote the development of affordable housing that meets the diverse needs of the Broomfield community.”

Boards and Commissions - meetings were held with the following boards and commissions.

- Open Space and Trails Advisory Committee - The proposed code changes were presented to the Open Space and Trails Advisory Committee (OSTAC) on April 24, 2025. OSTAC asked clarifying questions on the proposal and was supportive of the request. A formal vote was not held on the proposal.
- Land Use Review Commission - Staff presented the proposal to the Land Use Review Commission (LURC) on April 28, 2025. LURC asked staff a number of questions on the proposal, generally related to the potential increase in density, building heights, and the reduction of on-site open area. One commissioner did identify concerns with the construction of denser residential development within Broomfield. A formal vote was not held on the proposal, and information was provided to the commission on how to provide additional feedback on the updates through the ordinance public hearing process.

Ordinance No. 2275

Proposed Ordinance No. 2275 amends Title 17, Zoning, of the Broomfield Municipal Code related to development standards for medium to high density residential development. If approved on first reading, proposed Ordinance No. 2275 will be published in full, and a public hearing will be scheduled for August 12, 2025.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2275

An ordinance to amend the Broomfield Municipal Code, Title 17 related to medium to high density residential zoning

Recitals.

Whereas, Broomfield's Zoning Ordinance was originally adopted in 1973 and the ordinance established a combination of Euclidean zoning and planned unit development districts.

Whereas, Euclidean zoning districts include Broomfield's primary residential zone districts, R-1 Low-Density Residential, R-3 Medium-Density Residential and R-5 High-Density Residential.

Whereas, since the creation of the residential districts in 1973, few updates have been made to the districts.

Whereas, when the zoning ordinance was first created, the social and economic conditions within the City and County of Broomfield and across the country differed from modern times. At that time, low-density single-family development was the primary living condition and was financially feasible for many Americans. Many of these singly-family neighborhoods have since become unaffordable to many potential residents.

Whereas, communities across the nation are considered updates to residential development requirements to incentivize sustainable growth and development patterns as well as affordable housing options, and Broomfield desires to amend the residential zones districts to provide more opportunities for a variety of housing types and clarify and revise density and other requirements for residential zone districts.

Now, therefore, be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 17-16, R-3 Medium-Density Residential District, of the Broomfield Municipal Code is amended as follows:

Chapter 17-16 - R-3 ~~Medium-Density~~ **Medium-Low Density** Residential District

17-16-010 - Intent.

It is intended that the R-3 district be applied in those instances where ~~medium-density~~ residential uses such as **small lot single-unit residential**, townhouses, duplexes, ~~or triplexes~~ or **low-density multiple-unit developments** are desired.

17-16-020 - Permitted uses; by right.

The following uses are permitted by right in the R-3 district:

- (A) ~~One-family unit dwellings attached and detached;~~
- (B) ~~Multiple-family unit dwellings; including but not limited to duplexes, triplexes and quadplexes;~~
- (C) ~~Churches and church facilities; Churches, mosques, synagogues, temples, and other religious facilities;~~
- (D) Public and private schools for elementary, junior, and senior high school education;
- (E) ~~Public and private recreational areas, and facilities;~~
- (F) Aboveground and underground distribution and transmission lines for public utilities when said lines primarily serve the city;
- (G) Home occupations as defined in section 17-32-020; ~~and~~
- (H) Accessory buildings and uses; ~~including accessory dwelling units consistent with the standards established within section 17-32-160;~~
- (I) ~~Clubhouses and associated community spaces when associated with a residential community; and~~
- (J) Group Living Homes consistent with the standards established within Chapter 17-33 of the Broomfield Municipal Code.

17-16-030 - Permitted uses; by special review.

The following uses are permitted by special review in the R-3 district:

- (A) Child day care facility;
- (B) ~~Noncommercial recreational uses~~ Other public and private recreational facilities not permitted by right;
- ~~(C) Residential planned unit developments (PUD);~~
- ~~(D)~~ (C) Mobile home communities subject to the provisions of chapter 17-42;
- ~~(E)~~ (D) Public utility substations and major transmission lines when said lines primarily serve areas other than Broomfield. Substations shall not contain major office, repair, or storage space;
- ~~(F)~~ (E) Municipal buildings; **Water and sewer facilities and stations including storage.**
- (F) Clubhouses and community spaces when associated with a principal residential use.
- ~~(F) Public uses as follows:-~~
 - ~~(1) Water facilities, including storage,~~
 - ~~(2) Wastewater treatment facilities, and~~
 - ~~(3) Related facilities.~~

17-16-040 - Maximum density.

Maximum density in the R-3 district shall not exceed ~~ten~~ **twenty** units per gross acre. ~~Under a planned unit development, density may be increased to twelve units per acre.~~

17-16-050 - Lot and yard requirements.

The following are minimum lot and yard requirements in the R-3 district:

Single-Unit, Duplexes, Triplexes, Townhomes on Individual Lots

Area	Minimum Requirement
Lot area ~~(2 acres for schools, churches and church facilities)~~	8,000 ~~1,125~~ square feet
Lot width	
Interior lot	~~75 feet~~ 15 feet
Corner lot	~~85 feet~~ 40 feet
Lot depth	~~100 feet~~ 75 feet
Front yard	~~25 feet~~ 10 feet
Rear yard	
Principal building	~~20~~ 15 feet
Accessory building	5 feet
Side yard	5 feet for detached or end units, 0 feet for attached units 40 feet for residential uses, 25 feet for other permitted principal buildings
Side yard (corner)	20 15 feet from public right-of-way for residential uses, 25 feet for other permitted principal buildings
Rear and side yard when adjacent to an A, E-1, E-2, or R-1 district	Yard shall be 2 times the height of the adjacent building

~~Depth is increased twenty feet when rear lot line is adjacent to a street other than a local street; or if adjacent to a railroad, major utility overhead transmission line or a commercial or industrial zone.~~

Multi-unit developments, Religious and Nonresidential uses

Area	Minimum Requirement
Lot Area	20,000 sq ft
Front yard	10 feet
Rear yard	
Principal building	20 feet
Accessory building	5 feet
Side yard	20 feet

17-16-060 - Building height.

~~Buildings in the R-3 district shall not be higher than two stories, and in no case higher than thirty feet. Maximum building height in the R-3 district shall not exceed forty-five feet~~

including rooftop access structures. Accessory buildings shall be a maximum of 25 feet. Maximum height for buildings adjacent to R-1 zoned residential properties shall be limited to a maximum height of thirty-five feet within thirty feet of the shared property line.

17-16-070 - Open area.

In the R-3 district, **developments with four or more dwellings on one property shall require a minimum of 4025% of the site shall be developed and maintained as private open area for use by the occupants of the project.**

17-16-080 - General provisions.

Use of land in the R-3 district shall also conform to the parking, signing, and other provisions of this title. **An overall site plan shall be provided with all building permits to ensure consistency with the standards established in this chapter. Engineering reports may be requested as needed.**

Section 2.

Chapter 17-18, R-5 High Density Residential District, of the Broomfield Municipal Code is amended as follows:

Chapter 17-18 - R-5 ~~High~~ **Medium-High** Density Residential District

17-18-010 - Intent.

The demand for multiple-familyunit housing should be accommodated ~~primary~~ **primarily** through this district and the ~~R-7~~ **district**. The location of this zone should occur in areas where ~~intense urban development~~ moderate density development can assist in providing convenience to its occupants without negatively affecting ~~the environment and safety of the surrounding~~ neighborhood.

17-18-020 - Permitted uses; by right.

The following uses are permitted by right in the R-5 district:

- ~~(A) One-family dwellings;~~
- (B) **(A) Multiple-familyunit dwellings;**
- ~~(C) Boardinghouses and roominghouses;~~
- ~~(D) Fraternity and sorority houses;~~
- (E) **(B) Churches and church facilities; Churches, mosques, synagogues, temples, and other religious facilities;**
- (F) **(C) Public and private schools, including child day care facilities; for elementary, junior, and senior high school education;**
- (G) **(D) Public and private recreational areas, and facilities;**
- (H) **(E) Aboveground or underground distribution and transmission lines for public utilities when said lines primarily serve the city;**
- (I) **(F) Automobile parking areas for permitted uses; Clubhouses and associated community spaces when associated with a residential community;**

- (J) ~~(G)~~ Home occupations as defined in section 17-32-020; ~~and~~
- (K) ~~(H)~~ Accessory buildings and uses; ~~and~~
- (I) Group Living Homes consistent with the standards established within Chapter 17-33 of the Broomfield Municipal Code.**

17-18-030 - Permitted uses; by special review.

The following uses are permitted by special review in the R-5 district:

- ~~(A) Noncommercial recreational uses; Other public and private recreational facilities not permitted by right;~~
- ~~(B) Residential planned unit developments (PUD);~~
- ~~(C) (B) Colleges and universities;~~
- ~~(D) (C) Mobile home communities, subject to the provisions of chapter 17-42, B.M.C.;~~
- ~~(E) (D) Hospitals, nNursing homes, and sanitariums senior living facilities;~~
- ~~(F) (E) Medical and dental clinics;~~
- ~~(G) (F) Offices;~~
- ~~(H) (G) Public utility substations and major transmission lines when said lines primarily serve areas other than Broomfield. Substations shall not contain major office, repair, or storage space;~~
- ~~(I) (H) Municipal buildings; Water and sewer facilities and stations including storage; and~~
- ~~(J) Public uses as follows:~~
 - ~~(1) Water facilities, including storage,~~
 - ~~(2) Wastewater treatment facilities, and~~
 - ~~(3) Related facilities;~~
- (I) (I) Child day care facilities;**

17-18-040 - Maximum density.

Maximum density in the R-5 district shall not exceed ~~twenty~~ **forty** units per gross acre. ~~Under a planned unit development, density may be increased to twenty-five units per acre.~~

17-18-050 - Lot and yard requirements.

The following are minimum lot and yard requirements in the R-5 district:

Area	Minimum Requirement
Lot area	
Residential	10,000 sq ft
Churches	~~2~~ acres
~~Other n~~ Nonresidential	20,000 square feet
Lot width	

Interior lot	100 feet
Corner lot	100 feet
Lot depth	100 feet
Front yard	~~25~~ 10 feet
Rear yard	
Principal building	20 feet
Accessory building	5 feet
Side yard	10 feet for residential uses, 25 feet for other permitted principal buildings
Side yard ~~(corner)~~ when adjacent to public ROW	20 feet for residential uses, 25 feet for other permitted principal buildings
Rear and side yard when adjacent to A, E-1, E-2, or R-1 district	~~Yard shall be twice the height of the adjacent building~~

~~Depth is increased twenty feet when rear lot line is adjacent to a street other than a local street; or if adjacent to a railroad, major utility overhead transmission line or a commercial or industrial zone.~~

17-18-060 - Building height.

Maximum building height in the R-5 district shall not exceed ~~two~~ four stories or ~~thirty-five~~ feet, including rooftop access structures within 100 feet of the boundary of an E-1, E-2, or R-1 district. Beyond that distance, the building height may be greater, if approved by the city in accordance with chapter 17-30. Accessory buildings shall be a maximum of 25 feet. Maximum height for buildings adjacent to R-1 zoned residential properties shall be limited to a maximum height of thirty-five feet within thirty feet of the shared property line.

17-18-070 - Open area

In the R-5 district, a minimum of ~~40~~15% of the site shall be developed and maintained as private open area for use by the occupants of the project.

17-18-080 - General provisions.

Use of land in the R-5 district shall also conform to the parking, signing, and other provisions of this title. An overall site plan shall be provided with all building permits to ensure consistency with the standards established in this chapter. Engineering reports may be requested as needed.

Section 3.

A new Chapter 17-18.1, R-7 High Density Residential District, of the Broomfield Municipal Code is added as follows:

Chapter 17-18.1- R-7- High Density Residential District

17-18.1-010 - Intent.

Multiple-unit housing should be accommodated primarily through this district and the R-5 district. The intent of this zone district is to encourage a range of dense housing opportunities including income-aligned housing through infill, redevelopment and greenfield development.

17-18.1-020 - Permitted uses; by right.

The following uses are permitted by right in the R-7 district:

- (A) Multi-unit dwellings;
- (B) Clubhouses and associated community spaces when associated with a residential community;
- (C) Churches, mosques, synagogues, temples, and other religious facilities;
- (D) Public and private schools for elementary, junior, and senior high school education;
- (E) Public and private recreational areas;
- (F) Aboveground or underground distribution and transmission lines for public utilities when said lines primarily serve the city;
- (G) Home occupations as defined in section 17-32-020;
- (H) Accessory buildings and uses; and
- (I) Group Living Homes consistent with the standards established within Chapter 17-33 of the Broomfield Municipal Code.

17-18.1-030 - Permitted uses; by special review.

The following uses are permitted by special review in the R-7 district:

- (A) Multi-unit residential developments exceeding the density or height standards established in sections 17-18.1-040 and 17-18.1-050 of this code.
- (B) Other public and private recreational facilities not permitted by right;
- (C) Nursing homes and senior living facilities;
- (D) Medical and dental clinics;
- (E) Offices;
- (F) Public utility substations and major transmission lines when said lines primarily serve areas other than Broomfield. Substations shall not contain major office, repair, or storage space;
- (G) Water and sewer facilities and stations including storage; and
- (H) Child day care facilities

17-18.1-040 - Maximum density.

Maximum density in the R-7 district shall not exceed eighty units per gross acre unless approved through a Use by Special Review.

17-18.1-050 - Lot and yard requirements.

The following are minimum lot and yard requirements in the R-7 district:

Area	Minimum Requirement
Lot area	
Multi-unit residential	10,000 square feet
Nonresidential	20,000 square feet
Front yard	25 feet to parking lots (driveways not included) 15 feet to building
Rear yard	
Principal building	20 feet
Accessory structure	5 feet
Side yard	10 feet
Side yard when adjacent to public ROW	20 feet
Rear and side yard when adjacent to A, E-1, E-2, or R-1 district	50 feet to parking and building

17-18.1-060 - Building height.

The building height may be a maximum of 80 feet unless approved for greater height by Use by Special Review. Accessory buildings shall be a maximum of 25 feet.

17-18.1-070 - Open area.

In the R-7 district, a minimum of 15% of the site shall be developed and maintained as private open area for use by the occupants of the project.

17-18.1-080 - General provisions and process required.

(A) Use of land in the R-7 district shall also conform to the parking, signing, landscaping, and other provisions of this title.

(B) Site Development Plan Required

(1) Prior to the submittal of any site development plan, the applicant shall submit a concept plan for initial concept review consistent with the requirements of Chapter 17-38, article I, B.M.C.

(2) An approved site development plan, consistent with the requirements of Chapter 17-38, article III, B.M.C., is required prior to the issuance of a

building permit for a use permitted in this chapter. Such site development plan shall be reviewed and approved by the land use review commissioner and city council as set forth in Chapter 17-38.

- (3) The reviews, procedures, submission requirements, recording requirements, and other requirements of title 16 and title 17 shall apply to all properties designated as R-7, except as modified in this chapter.

Section 4.

Chapter 17-34, Supplementary Regulations, of the Broomfield Municipal Code is amended as follows:

Chapter 17-34 - Supplementary Regulations

17-34-010 - Lot area and width; sewage system required.

- (A) Where an individual lot was held in separate ownership from adjoining properties or was platted prior to the effective date of the ordinance codified in this title in a recorded subdivision and has less area or less width than required in other sections of this title, such a lot may be occupied according to the permitted uses provided for the district in which the lot is located; provided that no lot area or lot width is reduced more than one-third of the zoning requirements otherwise specified by this title.
- (B) For the purpose of complying with the provisions of this title, no part of an area or width of a lot shall be included as an area or width required for another lot.
- (C) Every principal building hereinafter erected upon a tract of ground not served by a public sanitary sewage system shall be served by a private sanitary sewage system which complies with all state and county regulations.
- ~~(D) No lot shall have a front lot line or street frontage of less than forty feet.~~

17-34-020 - Yards.

- (A) Major highway setback. The setback for any yard adjacent to a major highway as designated on the zoning district map shall be 110 feet from the centerline of the right-of-way; except that where more than 50% of the block is developed with buildings having less setback, the average front line of such buildings shall be the minimum setback requirement for all new construction in such developed block.
- (B) Developed areas. In any district where lots comprising 50% or more of the frontage on one side of a street between intersecting streets have been improved with buildings at the time of passage of the ordinance codified in this title, the average front yard or setback of such buildings shall be the minimum front yard or setback required for all new construction in such block. Vacant lots shall be calculated at the present setback requirement to determine the block average. In no instance shall the setback be less than ten feet.
- (C) Reduction. No part of a yard required for any building for the purpose of complying with the provisions of this title shall be included as a yard for another building, and all yards shall be open and unobstructed except as otherwise provided in this title.

- (D) Architectural features. Cornices, canopies, eaves, or similar architectural features may extend into a required yard not more than two feet.
- (E) Fire escapes. Fire escapes may extend into a required yard not more than six feet.
- (F) Decks, garages, carports, and porches. In any non-PUD district, decks, garages, carports, or porches may extend not more than six feet into any front or rear yard setback.
- (G) Reversed corner lots. The side yard along the street side of a reversed corner lot shall be not less than the required front yard for principal buildings along such a side street.
- (H) Accessory buildings. Permitted accessory buildings may be located in the required side or rear yard of a principal building, provided that such accessory buildings are located at least seven and one-half feet from any principal building or from another accessory building and not located in any side yard adjacent to a street.
- (I) **No structures may be constructed within easements without written approval from the easement grantee. All sight distance, corner clearance, and driveway spacing should meet Broomfield Engineering Standards and Specifications.**

Section 5.

Chapter 17-38, Planned Unit Development, of the Broomfield Municipal Code is amended as follows:

VIII. Uniform Subdivision Standards for Residential PUD Plans and Residential Site Development Plans

...

~~17-38-330 Standards for medium-density residential, single-family attached.~~

- ~~(A) Parcel area is 8,000 square feet.~~
- ~~(B) Parcel width is seventy-five feet for an interior lot and eighty-five feet for a corner lot.~~
- ~~(C) Flag lots as defined in subsection 16-08-010(F), B.M.C., are prohibited.~~
- ~~(D) Parcel frontage on a cul-de-sac is forty feet.~~
- ~~(E) Minimum parcel setbacks.~~
 - ~~(1) Front yard is twenty-five feet.~~
 - ~~(2) Rear yard is twenty-five feet~~
 - ~~(3) Side yard corner is twenty feet~~
 - ~~(4) Side yard is ten feet—No portion of any structure, including eaves, overhangs, protecting windows, fireplaces, cantilevers, or any other part of a dwelling shall encroach onto the side yard.~~
- ~~(F) Maximum overall dwelling height is thirty-three feet as measured by the vertical distance from finished ground level at the building wall to the highest point on the roof surface.~~

~~17-38-340 Standards for medium-density residential, single-family detached.~~

- ~~(A) Minimum lot area is 5,000 square feet.~~
- ~~(B) Minimum lot width is fifty feet for an interior lot and sixty feet for a corner lot.~~

~~(C) Flag lots as defined in subsection 16-08-010(F), B.M.C., are prohibited.~~

~~(D) Minimum lot frontage on a cul-de-sac is forty feet.~~

~~(E) Minimum lot setbacks.~~

~~(1) Front yard is twenty feet.~~

~~(2) Rear yard is fifteen feet.~~

~~(3) Side yard corner is fifteen feet.~~

~~(4) Side yard is seven and one-half feet. No portion of any structure, including eaves, overhangs, protecting windows, fireplaces, cantilevers, or any other part of a dwelling shall encroach onto the side yard.~~

~~(F) Maximum overall dwelling height is thirty-three feet as measured by the vertical distance from finished ground level at the building wall to the highest point on the roof surface.~~

~~(G) Neither fill nor cut shall be utilized at any building site to artificially create a walk-out basement on a lot or to artificially raise the grade adjacent to the building wall to reduce any calculated maximum height.~~

~~17-38-350 – Exceptions.~~

~~For good cause shown by the applicant, the city council may eliminate, alter, or vary some or all of these uniform subdivision standards for a residential PUD plan. A site development plan that does not comply with the uniform subdivision standards for a residential site development plan must include such deviations in the required list of deviations per section 17-38-160(A)(8), B.M.C.~~

Section 5.

Chapter 17-34, Supplementary Regulations, of the Broomfield Municipal Code is amended as follows:

Chapter 17-34 - Supplementary Regulations

17-34-010 - Lot area and width; sewage system required.

(E) Where an individual lot was held in separate ownership from adjoining properties or was platted prior to the effective date of the ordinance codified in this title in a recorded subdivision and has less area or less width than required in other sections of this title, such a lot may be occupied according to the permitted uses provided for the district in which the lot is located; provided that no lot area or lot width is reduced more than one-third of the zoning requirements otherwise specified by this title.

(F) For the purpose of complying with the provisions of this title, no part of an area or width of a lot shall be included as an area or width required for another lot.

(G) Every principal building hereinafter erected upon a tract of ground not served by a public sanitary sewage system shall be served by a private sanitary sewage system which complies with all state and county regulations.

~~(H) No lot shall have a front lot line or street frontage of less than forty feet.~~

17-34-020 - Yards.

- (J) Major highway setback. The setback for any yard adjacent to a major highway as designated on the zoning district map shall be 110 feet from the centerline of the right-of-way; except that where more than 50% of the block is developed with buildings having less setback, the average front line of such buildings shall be the minimum setback requirement for all new construction in such developed block.
- (K) Developed areas. In any district where lots comprising 50% or more of the frontage on one side of a street between intersecting streets have been improved with buildings at the time of passage of the ordinance codified in this title, the average front yard or setback of such buildings shall be the minimum front yard or setback required for all new construction in such block. Vacant lots shall be calculated at the present setback requirement to determine the block average. In no instance shall the setback be less than ten feet.
- (L) Reduction. No part of a yard required for any building for the purpose of complying with the provisions of this title shall be included as a yard for another building, and all yards shall be open and unobstructed except as otherwise provided in this title.
- (M) Architectural features. Cornices, canopies, eaves, or similar architectural features may extend into a required yard not more than two feet.
- (N) Fire escapes. Fire escapes may extend into a required yard not more than six feet.
- (O) Decks, garages, carports, and porches. In any non-PUD district, decks, garages, carports, or porches may extend not more than six feet into any front or rear yard setback.
- (P) Reversed corner lots. The side yard along the street side of a reversed corner lot shall be not less than the required front yard for principal buildings along such a side street.
- (Q) Accessory buildings. Permitted accessory buildings may be located in the required side or rear yard of a principal building, provided that such accessory buildings are located at least seven and one-half feet from any principal building or from another accessory building and not located in any side yard adjacent to a street.
- (R) **No structures may be constructed within easements without written approval from the easement grantee. All sight distance, corner clearance, and driveway spacing should meet Broomfield Engineering Standards and Specifications.**

Section 6.

This ordinance shall be effective seven days after public notice following final passage.

Introduced and approved after first reading on _____, 2025, and ordered published in full.

Introduced a second time and approved on _____, 2025, and further ordered published.

The City and County of Broomfield, Colorado

Attest:

Mayor

Office of the City and County Clerk

Approved As To Form:

NCR

City and County Attorney