

**Amendment 1 to TASK ORDER No. 32B – Scope Expansion for  
Design, Permitting, and Bidding Support Services for Chanhassen Public Works Decant Facility  
Pursuant to Agreement for Engineering Services  
Riley Purgatory Bluff Creek Watershed District and BARR Engineering Company.**

This Amendment to Task Order 32B is issued pursuant to Section 1b of the above-cited engineering services agreement between the Riley Purgatory Bluff Creek Watershed District (District) and BARR Engineering Company (Engineer) and incorporated as a part thereof.

1. Background

The Upper Riley Creek Corridor Enhancement Plan design team met with the RPBCWD Administrator and representatives of the City of Chanhassen (City) Public Works department on July 25, 2022 to review 30% design plans for the stream restoration project and opportunities to improve stormwater management leaving the City’s outdoor facilities at the Public Works building located at 7901 Park Place, Chanhassen. As a regulated MS4, Chanhassen is required to implement a storm water management program designed to reduce pollutant concentrations entering the storm sewer system and maintain the existing storm sewer system, part of which includes the sweeping street, cleaning out ponds, removal of sediment deltas at outfalls, as well as sediment removal from sump manholes, hydrodynamic separators. Because these activities can remove sediments containing pollutants, heavy metals, or petroleum, they are effective non-structural best management practice (BMP) for reducing the impact of runoff on surface waters by improving water quality and conveyance efficiency. Because these materials are typically water laden, it is essential to dewater the materials to allow for cost-effective management, treatment, disposal, and reuse of the materials in an environmentally sound manner. City staff have identified a need for an enhanced on-site dewatering facility (a.k.a. decant facility) to expedite and improve management and treatment of water-laden materials. District and City staff suggested this type of facility be included in the Upper Riley Creek Ecological Enhancement plan to further protect the adjacent and downstream wetlands and Riley Creek.

Working with Administrator Jeffery and City Staff a technical memorandum was prepared to evaluate several Public Works Decant Facility alternatives. Subsequent discussions with District and City staff further refined the location and layout of a potential decant structure at the public works facility as well as outlined potential partnerships between the entities for implementation of the facility. The preferred approach suggested by Administrator Jeffery is to incorporate the facility implementation into the cooperative agreement under development for the Upper Riley Creek Corridor Enhancement Plan by memorializing the responsibilities of the partners (e.g., access, design, funding, etc.).

2. Description of Services:

Barr will work with District and City of Chanhassen staff to complete the engineering design and permitting for the proposed decant facility west the existing Chanhassen public works building. The new decant facility is anticipated to be a 170’ long by 30’ wide consist of 5 on grade bays. The bays would be covered by a metal awning. New gravity sanitary and storm sewers as well as service water utilities would serve the decant facility. Project design would be followed by incorporation of the appropriate specifications and construction drawings into the Upper Riley Creek Enhancement bidding documents. Barr would also prepare required permit applications. The anticipated services include in this task order amendment are based on the Public Works Decant Facility Addition

Concept technical memorandum dated August 31, 2022, the revised site layout dated November 11, 2022, and discussions with District and City staff (see attached).

In addition to the decant facility, Barr will work with the District and City to consider modifications to the site stormwater management and discharge associated with the additional impervious surfacing from the decant facility and access roads. Grading modifications on the property related to stormwater management and discharge are included in this task order.

This task order assumes the District and City would like to complete the design phase of the project in time for soliciting construction bids in the late spring of 2023 for construction completion in 2023 or early 2024.

Barr's proposed scope of work activities are divided into four phases (with phases 1 through 3 being part of this task order):

Phase 1: Preliminary Design (Task 1)

Phase 2: Final Design and Permitting Assistance (Tasks 2 and 3)

Phase 3: Bidding Assistance (Task 4)

Phase 4: Construction Administration Services (Future Task Order/Task 5).

3. Scope of Services:

This amendment includes the following tasks.

**Task 1. Data Collection and Preliminary Design**

Preliminary design will include the preparation of preliminary plans based on our previously completed conceptual design, additional records provided to Barr by the District and City, and additional field data (survey and borings) collected during this task. Plans will be prepared in AutoCAD, Civil 3D, and/or Revit.

For this phase, Barr will complete the following tasks:

- Hold a design kick-off meeting with Barr's engineering team, District and City staff, and other key stakeholders (virtual and/or in person) followed by a site visit
- Collect additional topographic survey data, utility locates, and tree survey in the project area (decant facility project area as well as a eastern stream tributary identified for stabilization and thus requiring additional survey); process the site survey data to create Civil 3D topographic and utility location base-map for the project area. This work will be subcontracted to HTPO per the direction of Administrator Jeffery.
- Collect geotechnical data for the proposed decant facility and stormwater management facility (up to 3 borings - two-30' borings for the decant facility and one-15' boring for the stormwater BMP)
- Prepare site excavation, grading, pavement, and stormwater drainage design
- Prepare preliminary retaining wall design
- Prepare concrete decant facility with metal awning design
- Preliminary drawings are anticipated to consist of:
  - Title sheet
  - Existing conditions

- Demolition plan
- Proposed site plan
- Proposed stormwater improvements
- Utility profiles
- Retaining wall plan
- Decant facility concrete plans and sections
- Decant facility metal awning plans and sections
- Prepare a brief preliminary basis of design memorandum
- Prepare a preliminary opinion of probable construction cost
- Meet with District and City staff (virtual) to review the preliminary plans and basis of design and obtain input before proceeding with final design

### **Task 2. Final Design**

Upon receipt of the District's and City's review comments on the preliminary basis of design and plans, Barr will update the design to incorporate these review comments and complete the final design of the project.

For this task, Barr will complete the following tasks:

- Meet (virtual) with the District and City at 60% and 90% complete to review final design plans and to gather comments before proceeding to the next milestone completion percentage
- Progress the design and drawings to 60%, 90%, and 100% design
- Prepare and progress technical specifications to 90% and 100% design
  - Technical specification will follow Construction Specifications Institute (CSI) format with Engineers Joint Contract Documents Committee (EJCDC) general conditions including all "upfront" sections such as general conditions, supplementary conditions, summary of work and those related to bidding and contracting. The development of the technical specification will be coordinated with the District Administrator and Counsel. Barr assumes specifications will be in CSI format with Engineers Joint Contract Documents Committee (EJCDC) general conditions. Barr reserves the right to modify budget if technical specification format is other than stated in this paragraph. Specifications will be provided for review in conjunction with the Final Construction Drawings and include up to one set of revisions.
- Issue plans and specifications for bid (100% complete)
- Develop erosion control drawings for inclusion in a SWPPP
- Provide Opinion of Probable Cost updates at 60%, 90% and 100% complete design milestones

### **Task 3. Permitting Assistance**

Permitting assistance will consist of assisting the District with preparation of permit applications for the project. We anticipate a construction NPDES permit with SWPPP, MPCA/MCES sanitary sewer extension permit, and RPBCWD permits will be required for this project. Permit application fees will be paid by the District and are not included in anticipated design fees provided below. If needed to expedite the application process, Barr will pay the permit fees, if directed by District Administrator, and invoice to the District as a direct expense on the monthly invoice. This effort will be coordinated with the District Administrator on a time and expense basis.

The District's and City's timely review of permit application materials prior to submittal and designation of Barr as its authorized agent for permitting (as applicable) will allow Barr to submit permit applications and maintain the project efficiency and schedule.

District staff will complete a field wetland delineation, survey of existing vegetation (including floristic quality index), and a functional assessment of all areas that could potentially be disturbed by project construction, including but not limited to access routes and staging areas. The wetland delineation will be completed in accordance with the 1987 USACE Manual and the Midwest regional supplement.

District staff will draft a wetland delineation report documenting the presence of wetlands and other waters in the survey area. The District will submit the delineation report and a request for delineation concurrence to the Local Government Unit (LGU) responsible for administering the Minnesota Wetland Conservation Act (WCA) – in this case, the city of Chanhassen. If requested by the LGU, District will participate in one meeting with the Technical Advisory Panel to review the wetland delineation on-site. Barr staff will be available for support and review during this process on a time and expense basis.

Permit applications will be prepared following completion of 60% design.

#### **Task 4. Bidding Assistance**

Barr will conduct: a pre-bid meeting and site visit (if warranted); prequalification of bidders, if appropriate; review of bids; follow-up inquiries with bidders; and issue up to one addendum as appropriate to clarify, correct, or change the bidding documents. Advertising and bidding dates will be coordinated with District Administrator. It is presumed that advertising for bids would occur in the District's official newspapers. To facilitate timely submission and publication and because the advertisement fees are unknown, ad fees will be paid by the Barr and invoiced to the District as a direct expense in addition to the estimated budget for this task order.

Barr will conduct the bid opening, review bids, and prepare recommendations on contractor selection for the board of Manager's consideration.

#### **Task 5. Construction Services (future project phase)**

For this future task, we anticipate Barr will complete the following tasks (Barr's scope of services, schedule, and budget for this future task will be finalized after the final design and bidding/permitting phases):

- Facilitate preconstruction, weekly construction progress, and closeout meetings during the construction
- Review equipment and material submittals (shop drawings) to determine compliance with the design concept of the project
- Respond to requests for information (RFIs)
- Process field orders, if necessary
- Negotiate and process change orders, if necessary
- Provide clarifications and interpretation of the plans and specifications
- Provide construction observation

- Review laboratory tests to determine suitability of construction materials
- Review contractor payment application requests
- Coordinate with independent laboratory providing testing of materials as part of a QA/QC program, if necessary, during the construction phase
- Prepare punch-list, conduct final inspection, and make recommendations for final acceptance and payment
- Prepare construction record drawings from contractor field notes and Barr’s construction observation notes
- Project management services and overall coordination to ensure successful project execution and District and City satisfaction.

**Task 6. QA/QC Review**

Barr will leverage other experienced staff not directly involved in the design of the project to provide QA/QC review at the preliminary, 60%, 90% and 100% (issued for bid) design phases. As part of QAQC for these items, work products will be reviewed by a qualified senior team member prior to submittal to the District and City for review.

**Task 7. Project Management**

Project management is a key component to help meet project milestones. In addition, project management will help make sure the work meets the expectations of District and City staff and other stakeholders and that work is completed in a satisfactory manner within the project timeline and within the agreed-upon budget.

Barr will continue to provide updates to the project team that document project progress and coordinate tasks. Barr will provide the District with monthly progress reports and budget status updates as part of the monthly invoicing process. Barr will solicit District Staff feedback on an ongoing basis to maintain clear and timely communication.

**Assumptions**

Barr has made several assumptions relating to individual work tasks in this agreement above in the task detailed descriptions. However, additional assumptions that do not correspond with a single work task are listed below:

- The anticipated services include in this task order amendment are based on the Public Works Decant Facility Addition Concept technical memorandum dated August 31, 2022, the revised site layout dated November 11, 2022, and discussions with District and City staff.
- There will be no changes to the wetland boundaries or types as approved in the Minnesota Wetland Conservation Act Notice of Decision issued by the City on November 4, 2020. If additional delineations or changes are needed, District staff will perform all wetland delineation and WCA permitting activities.
- The District and City will provide all available and applicable GIS and CAD files to Barr in an electronic format.
- No property boundary work or legal description work is needed as part of this amendment.
- All services related to construction assistance or preparation of a maintenance plan are excluded from this current task order.

- A subcontractor mark-up of 10% will be used to cover additional risks and costs of sub-consultants on design projects.
- The proposed budget includes costs for mileage reimbursement for site visits and additional data collection, as needed. Mileage will be charged according to the United States Business Standard Mileage Rate established by the IRS.
- The new utilities servicing the decant facility will be gravity sewers (no lift station required).
- The decant facility will not require electrical services (no lighting or electrical controls/monitoring are assumed to be needed for this scope).
- Permit fees are not included in this task order. If needed to expedite the application process, Barr will pay the permit fees, if directed by District Administrator, and invoice to the District as a direct expense on the monthly invoice. This effort will be coordinated with the District Administrator on a time and expense basis.
- Snow removal fees to complete the borings and geotechnical investigation scope is excluded from this task order. It is assumed the District or City will provide this service.
- RPBCWD will arrange for site access to the City public work facility and private property for additional survey of stream tributary.

4. Deliverables:

The following deliverables will be prepared and provided to the District:

- Decant facility kickoff meeting agenda and notes
- Topographic survey data incorporated into design drawings
- Preliminary Engineer's Opinion of Probable Cost
- Updated Engineer's Opinion of Probable Cost provided at 60%, 90%, and 100% design levels
- Preliminary drawings
- Updated drawings provided at 60%, 90%, and 100% design levels
- SWPPP, RPBCWD, and MET Council permit applications
- Technical specifications and provisions provided at 90% and 100% design levels
- Contract documents for the bid process
- Addenda
- Bid tabulation and recommendations memorandum for contractor selection.

The following construction services deliverables (as part of a future task) are anticipated to be prepared and provided to the District:

- Submittal and RFI responses
- Change orders
- Construction observation field notes and photographs
- Meeting notes
- Electronic copy of final punch list
- AutoCAD and PDF files of record drawings

5. **Budget:**

Services under this Task Order will be compensated for in accordance with the engineering services agreement and will not exceed \$174,000, without authorization by the Administrator or Board of Managers. Barr understands the importance of working as efficiently as possible while providing the services needed for design and construction of a resilient project. Therefore, we will look for cost saving during the entire design process in an effort to avoid unneeded duplication of past efforts. The following table provides a breakdown of the anticipated cost for major tasks associated with scope of services describe above.

Task	Task Description	Anticipated Budget	Anticipated Completion Date
1	Data Collection and Preliminary Design	\$62,000	February 2023
2	Final Design	\$73,000	May 2023
3	Permitting Assistance	\$20,000	May 2023
4	Bidding Assistance	\$6,000	June 2023
5	Construction Services	TBD	TBD 2023
6	QAQC Review	\$5,000	Ongoing
7	Project Management	\$8,000	Ongoing
<b>Addendum 1 Requested Fee Addition</b>		<b>\$174,000</b>	
Original Task Order 32B Amount		\$339,700	
Amended Contract Amount		\$513,700	

6. **Schedule and Assumptions Upon Which Schedule is Based**

The schedule outlined above assumes project initiation will occur in December 2022. The schedule may be modified depending on actual initiation of project work, stakeholder reviews, permit approvals, and stakeholder coordination efforts. The schedule will be further developed as part of project initiation and reviewed with the District as part of Task 1.

**IN WITNESS WHEREOF**, intending to be legally bound, the parties hereto execute and deliver Amendment 1 to Task Order 32B of this Agreement.

**CONSULTANT**

**RILEY PURGATORY BLUFF CREEK  
WATERSHED DISTRICT**

By \_\_\_\_\_

By \_\_\_\_\_

Its  Vice President

Its \_\_\_\_\_

Date:

Date:

*APPROVED AS TO FORM & EXECUTION*

Attachment 1:  
August 2022 Public Works Decant Facility Addition Concepts Memo

## Technical Memorandum

**To:** RPBCWD Administrator Terry Jeffery and City of Chanhassen  
**From:** Scott Sobiech, Jessica Olson, Dale Price – Barr Engineering  
**Subject:** Public Works Decant Facility Addition Concepts  
**Date:** 8/31/2022  
**Project:** RPBCWD Upper Riley Creek

The Barr Engineering Co. (Barr) design team for the Upper Riley Creek Corridor Enhancement Plan met with representatives of the City of Chanhassen (City) Public Works department and Riley Purgatory Bluff Creek Watershed District Administrator Jeffery on July 25, 2022 to review the current configuration of the City's outdoor facilities at the Public Works building located at 7901 Park Place, Chanhassen, MN, 55317. City staff have identified a need for an on-site decant facility for street sweeping, vector truck material, pond clean-out sediment, and other water-laden materials. The City requested that Barr perform a concept analysis of multiple layout concepts for one or more decant facilities within the current Public Works footprint to enhance the treatment and management of materials generated by regular street sweeping, removal of sediment from catch basins and storm sewers, and the removal of sediment deltas at outfalls. As a regulated MS4, Chanhassen is required to implement a storm water management program designed to reduce pollutant concentrations entering the storm sewer system, part of which includes the aforementioned activities. Because these activities can remove sediments containing pollutants, heavy metals, or petroleum, they are effective non-structural BMPs for reducing the impact of runoff on surface waters by improving water quality and conveyance efficiency. Because these materials are typically water laden, it is essential to dewater (aka decant) the materials to allow for cost-effective management, treatment, disposal, and reuse of the materials in an environmentally sound manner.

The purpose of this memorandum is to provide the City with the results of this analysis and includes a recommendation for the City to consider during selection. The selected concept will be incorporated into the next phase of design (i.e., 90%).

Four concepts were discussed as possible locations for the installation of a decant facility or decant facilities. All concepts include the proposal of facilities that are open to the air at the top as opposed to the inclusion of a roof.

- Concept A: East of Building
- Concept B: Northeast Property Corner
- Concept C: Boneyard (city preferred location as of 8/23)
- Concept D: North of Building

Concept figures, that include existing and proposed feature planimetric layouts of the public works property, are shown in **Attachment A**. All the concepts exclude a roof and presume it could be added at a future date. Table 1 provides a summary of the advantages and disadvantages of each for concept comparison. An engineer’s opinions of probable costs (OPC) for design, permitting, and construction were developed for each conceptual design. A summary of the OPC of each concept is provided in **Attachment B**. While the benchmarking information summarized in **Attachment C** is from projects in the state of Washington, a comparison of bid tabs from Washington and Minnesota indicates that unit prices are similar. The OPCs from the cost breakdowns compare fairly closely to estimates developed based on the benchmarking analysis.

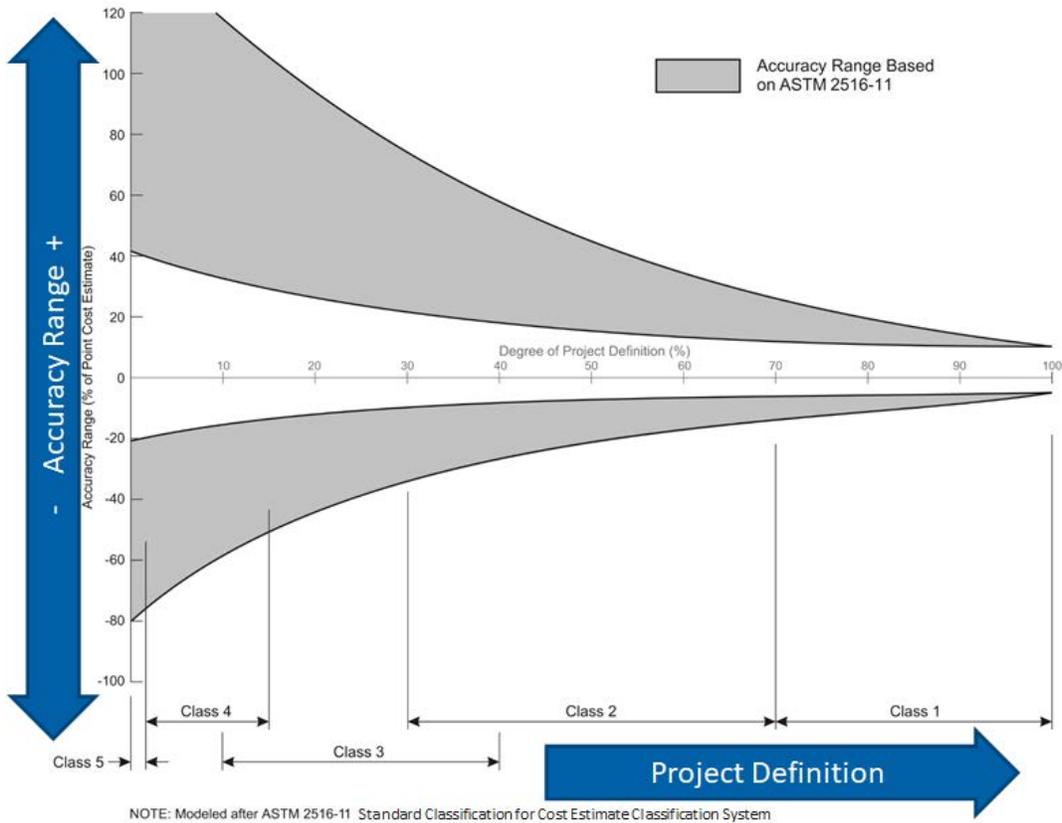
These OPCs, project reserves, contingency, documentation, and discussion are intended to provide background information for concept alternatives assessment, analysis purposes, and budget authorization by the project partners. Industry resources for cost estimating (AACE International Recommended Practice No. 18R-97, and ASTM E2516-06 Standard Classification for Cost Estimate Classification System) provide guidance on cost uncertainty, depending on the level of project design developed. As summarized in Figure 1, as the level of design detail increases the level of uncertainty is reduced.

**Table 1 Summary of Concept Advantages and Disadvantages**

Concept	Advantages	Disadvantages	Opinion of Cost Range	Potential Reasons for Dismissing
Concept A: East of Building	<ul style="list-style-type: none"> <li>• Largest potential facility footprint (could fit four 30’ x 50’ bays).</li> <li>• Existing salt, soil, and rock storage unimpacted</li> <li>• Easy access to water and sanitary utilities</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic conflicts with east garage traffic</li> <li>• Proposed to be built over existing city and Met Council sanitary sewer lines, thus limiting access</li> <li>• Met Council easement may prohibits construction of structure</li> <li>• RPBCWD creekside setback and buffer requirements restrict activities (would necessitate a variance request)</li> <li>• Requires existing pavement removal, implicant additional permitting requirements</li> </ul>	\$560,000 - \$980,000	<ul style="list-style-type: none"> <li>• Met Council sewer easement</li> <li>• Traffic conflicts</li> <li>• Creekside setback requirements</li> <li>• Does not address bare soils within boneyard area which would require additional project elements</li> </ul>

Concept	Advantages	Disadvantages	Opinion of Cost Range	Potential Reasons for Dismissing
Concept B: Northeast Property Corner	<ul style="list-style-type: none"> <li>Existing salt, soil, and rock storage unimpacted</li> <li>Water and sanitary utilities readily accessible</li> <li>Potential to reuse existing concrete walls</li> <li>Likely located outside RPBCWD Creekside setback and buffer requirements</li> <li>Minimal disruption of existing traffic pattern</li> </ul>	<ul style="list-style-type: none"> <li>Available space limit facility to a single - 42'x50' bay</li> <li>Proposed to be built over existing city and Met Council sanitary sewer lines, thus limiting access</li> <li>Met Council easement may prohibits construction of structure</li> <li>RPBCWD creekside setback and buffer requirements may restrict activities (would necessitate a variance request)</li> </ul>	\$410,000 - \$710,000 (smaller footprint due to limited space)	<ul style="list-style-type: none"> <li>Inadequate space</li> <li>Met Council sewer easement</li> <li>Does not address bare soils within boneyard area which would require additional project elements</li> </ul>
Concept C: Boneyard (city preferred location as of 8/23)	<ul style="list-style-type: none"> <li>Existing salt, soil, and rock storage unimpacted</li> <li>Access to existing sanitary sewer lines is not limited with decant facility construction</li> <li>Presents limited change to current onsite traffic flow</li> <li>Easiest potential traffic routing (potential to add from the south access road)</li> </ul>	<ul style="list-style-type: none"> <li>Limits existing boneyard functionality</li> <li>Access to potable water more challenging</li> <li>Met Council easement likely limits structure location</li> <li>RPBCWD creekside setback and buffer requirements may restrict activities (would necessitate a variance request)</li> </ul>	\$590,000 - \$1,030,000	
Concept D: North of Building	<ul style="list-style-type: none"> <li>Unimpacted by RPBCWD creekside setback or buffer requirements.</li> <li>Potential to reuse concrete walls from soil storage bays</li> </ul>	<ul style="list-style-type: none"> <li>Existing soil and rock storage impacted, thus requiring relocation</li> <li>May cause potential traffic conflicts with east garage traffic</li> </ul>	\$580,000 - \$1,020,000	<ul style="list-style-type: none"> <li>Does not address bare soils within boneyard area which would require additional project elements</li> </ul>

Concept	Advantages	Disadvantages	Opinion of Cost Range	Potential Reasons for Dismissing
		<ul style="list-style-type: none"> <li>Increased costs due to reconstruction of existing concrete walls associated with soil storage bays</li> <li>Distance from existing sanitary and water utilities</li> </ul>		<ul style="list-style-type: none"> <li>Requires relocation of existing soil and rock storage areas</li> </ul>



**Figure 1 Variability in Opinion of Probable Cost (OPC) based on Project Definition Level**

The OPCs were developed based on concept-level designs, bench marking from similar projects, unit prices from recent bids, and Barr Engineering Co.'s professional judgment. The OPC for the alternatives evaluated generally corresponds to a Class 5 estimate characterized by completion of limited engineering (<5% level of design) and limited use of deterministic estimating methods. The OPC is based on concept-level design alternatives, alignments, quantities, and unit prices. Contingency used in these OPCs are

intended to help identify an estimated construction cost amount for the minor items included in the current project scope but have not yet been quantified or estimated directly during the concept evaluation. Stated another way, contingency is the resultant of the pluses and minuses that cannot be estimated at the level of project definition that exists. The contingency includes the cost of ancillary items not currently itemized in the quantity summaries but commonly identified in more detailed design and required for completeness of the work. A 20% contingency is applied to the estimated construction cost to account for the costs of these items.

Due to the early stage of design, it is standard practice to place a broad accuracy range around the point cost estimate. The accuracy range is based on professional judgment considering the level of design completed, the complexity of the project, and the uncertainties in the project scope; the accuracy range does not include costs for future scope changes that are not part of the project as currently defined or risk contingency. The estimated accuracy range for this point estimate is -20% to +40%. Developing opinions of cost are very challenging in 2022 given the volatility in the construction industry, including but not limited to fuel cost and material supply constraints.

As summarized in Table 1 there are various site constraints that limit the potential location for a decant facility. Based on input from the City on August 23, 2022 Concept C – Boneyard location is the preferred location to consider for further design. Concept C does not require additional demolition or reconstruction of existing storage facilities, thus limiting the extents of disturbed and new impervious surface requiring stormwater management. Concept C also provides easier access for relevant ingress and egress traffic from the south access road. If this Concept is pursued, additional information (survey, soil borings, easement language, etc.) must be collected and the site layout configuration needs to account for RPBCWD's creekside setbacks and creek and wetland buffers as well as the existing Metropolitan Council (MCES) sanitary sewer easement. Placing the facility in the Boneyard location provides the added benefit of cleaning up an area that is prone to discharging sediment into the adjacent wetland due to routine disturbance by material storage activities. The other concepts would not address this pollutant source without additional project elements. This concept does not limit continued access to existing sanitary sewer lines.

While the anticipated total project cost is significant, potential cost reduction measures that would be vetted during a detailed design process include:

- Reducing the footprint of the proposed facility, which has the most significant potential for cost savings as well as reducing permitting challenges
- Using Eco-Block modular walls instead of cast-in-place
- Using Precast concrete panels instead of cast-in-place

We look forward to the continued discussion of opportunities to improve the runoff leaving the public works facility and protection the downstream water resources (wetlands, creek and lakes).

**To:** RPBCWD Administrator Terry Jeffery and City of Chanhassen  
**From:** Scott Sobiech, Jessica Olson, Dale Price – Barr Engineering  
**Subject:** Public Works Decant Facility Addition Concepts  
**Date:** 8/31/2022  
**Page:** 6

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#### Attachments

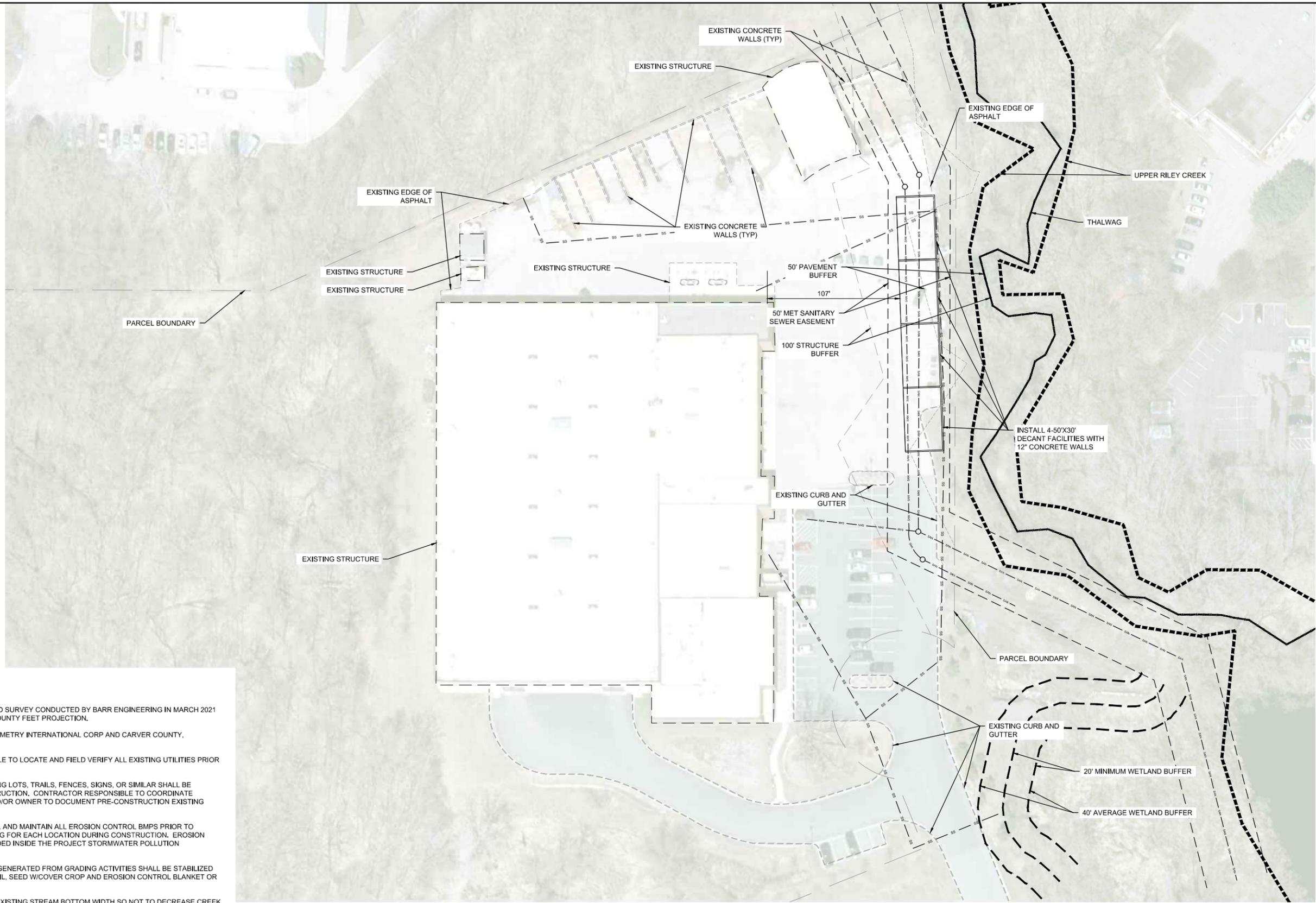
- Attachment A: Decant Facility Concept figures
- Attachment B: Cost Estimate Concept Comparison Summary
- Attachment C: Summary of Benchmarking Analysis and Supporting Information

For Discussion

**ATTACHMENT A: Decant Facility Concept Figures**

For Discussion

CADD USER: DALE.J. PRICE FILE: M:\DESIGN\23270053\_14\UPPER RILEY CREEK\23270053\_DECANT FACILITY CONCEPT E OF BUILDINGS PLOT SCALE 1:2 PLOT DATE: 08/1/2022 11:48 AM



**GENERAL NOTES:**

1. TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH 2021 AND JULY 2022 IN CARVER COUNTY FEET PROJECTION.
2. IMAGERY: COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND CARVER COUNTY, MINNESOTA, 2021.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
6. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET OR STRAW MULCH.
7. CONTRACTOR TO MAINTAIN EXISTING STREAM BOTTOM WIDTH SO NOT TO DECREASE CREEK CROSS SECTIONAL AREA DURING RIPRAP INSTALLATION.
8. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND/OR ENGINEER AND STAKED IN THE FIELD.
9. TEST AND MANAGE DISTURBED SOILS ON SITE AS DESCRIBED IN THE RESPONSE ACTION PLAN.

1 PLAN: SITE LAYOUT



**CONCEPT SCHEMATIC  
NOT FOR CONSTRUCTION**

				I HEREBY CERTIFY THAT THIS PLAN/SPECIFICATION/REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.				CLIENT	08/31/22											
				BARR				BID												
				BARR ENGINEERING CO.				CONSTRUCTION RECORD												
				4300 MARKETPOINTE DRIVE				RELEASED TO/FOR	A	B	C	0	1	2	3					
				MINNEAPOLIS, MN 55435				DATE RELEASED												
				Corporate Headquarters: Minneapolis, Minnesota																
				Ph: 1-800-632-2277																
				Fax: (952) 832-2601																
				www.barr.com																

**BARR**  
Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
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www.barr.com

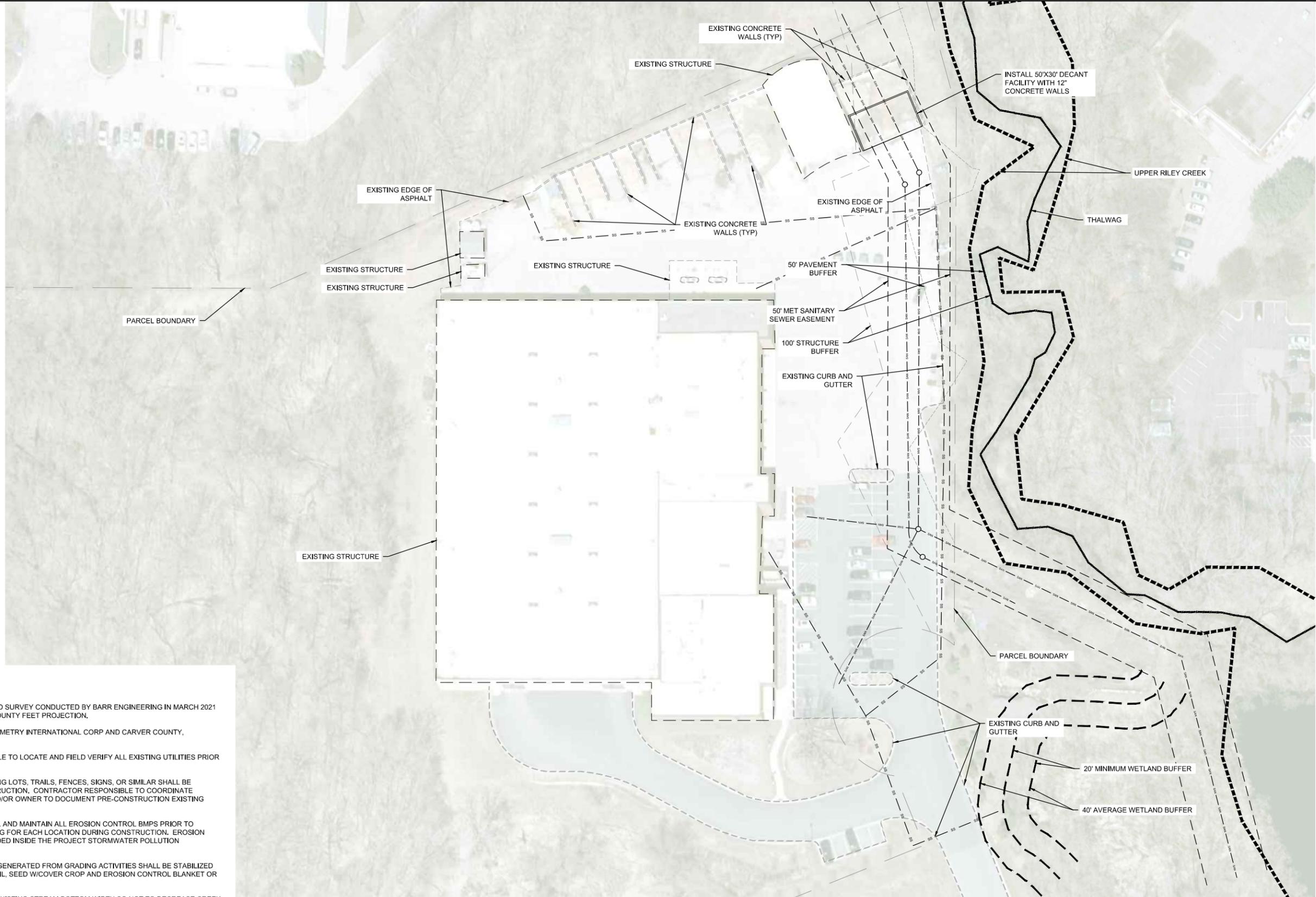
Scale	AS SHOWN
Date	08/31/2022
Drawn	EPF
Checked	JCO
Designed	BARR
Approved	SAS

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN.

**UPPER RILEY CREEK  
PUBLIC WORKS DECANT FACILITY CONCEPT**  
  
**SITE LAYOUT  
CONCEPT A**

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-01	REV. No. A

CADD USER: DALE.J. PRICE FILE: M:\DESIGN\23270033\_14\UPPER RILEY CREEK\CONCEPT NE CORNER.DWG CLIENT PROJECT No. 23/27-0053.14 DATE: 08/31/2022 11:47 AM



**GENERAL NOTES:**

1. TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH 2021 AND JULY 2022 IN CARVER COUNTY FEET PROJECTION.
2. IMAGERY: COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND CARVER COUNTY, MINNESOTA, 2021.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
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6. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET OR STRAW MULCH.
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8. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND/OR ENGINEER AND STAKED IN THE FIELD.
9. TEST AND MANAGE DISTURBED SOILS ON SITE AS DESCRIBED IN THE RESPONSE ACTION PLAN.

1 PLAN: SITE LAYOUT



CONCEPT SCHEMATIC  
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	EPF	JCO	SAS	08/31/2022	ISSUED FOR REVIEW

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_ LICENSE # \_\_\_\_\_

CLIENT	BID	CONSTRUCTION RECORD	RELEASED TO/FOR	DATE RELEASED
BARR ENGINEERING CO.	08/31/22		A B C 0 1 2 3	

**BARR**  
Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435  
Ph: 1-800-632-2277  
Fax: (952) 832-2601  
www.barr.com

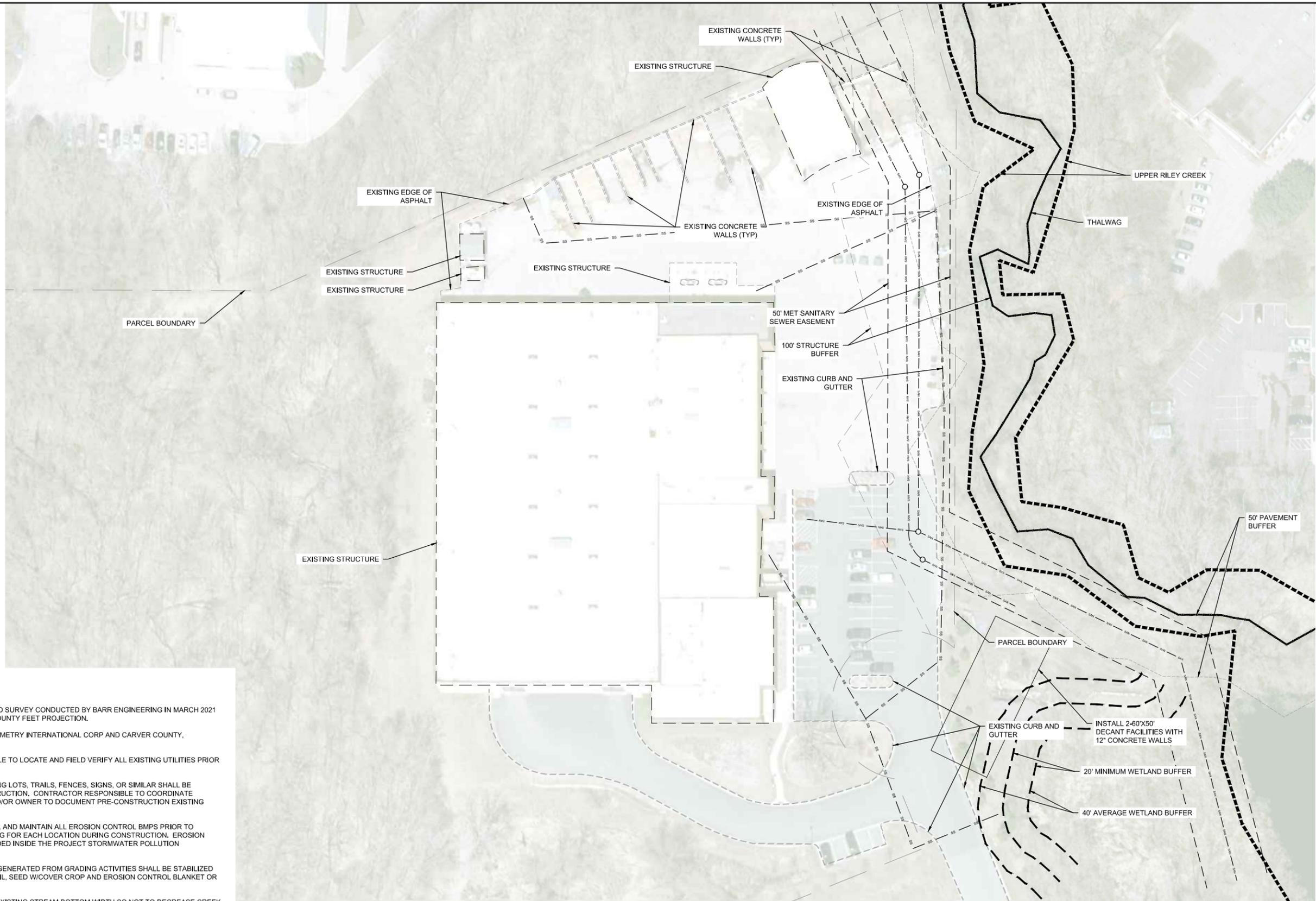
Scale	AS SHOWN
Date	08/31/2022
Drawn	EPF
Checked	JCO
Designed	BARR
Approved	SAS

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN.

UPPER RILEY CREEK  
PUBLIC WORKS DECANT FACILITY CONCEPT  
SITE LAYOUT  
CONCEPT B

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-01	REV. No. A

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1 PLAN: SITE LAYOUT



Project Office:  
**BARR ENGINEERING CO.**  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
 MINNEAPOLIS, MN 55435  
 Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277  
 Ph: 1-800-632-2277

Scale	AS SHOWN
Date	08/31/2022
Drawn	DJP
Checked	JCO
Designed	BARR
Approved	SAS

**RILEY PURGATORY BLUFF CREEK WD**  
 CHANHASSEN, MN.

**UPPER RILEY CREEK  
 PUBLIC WORKS DECANT FACILITY**  
 SITE LAYOUT  
 CONCEPT C

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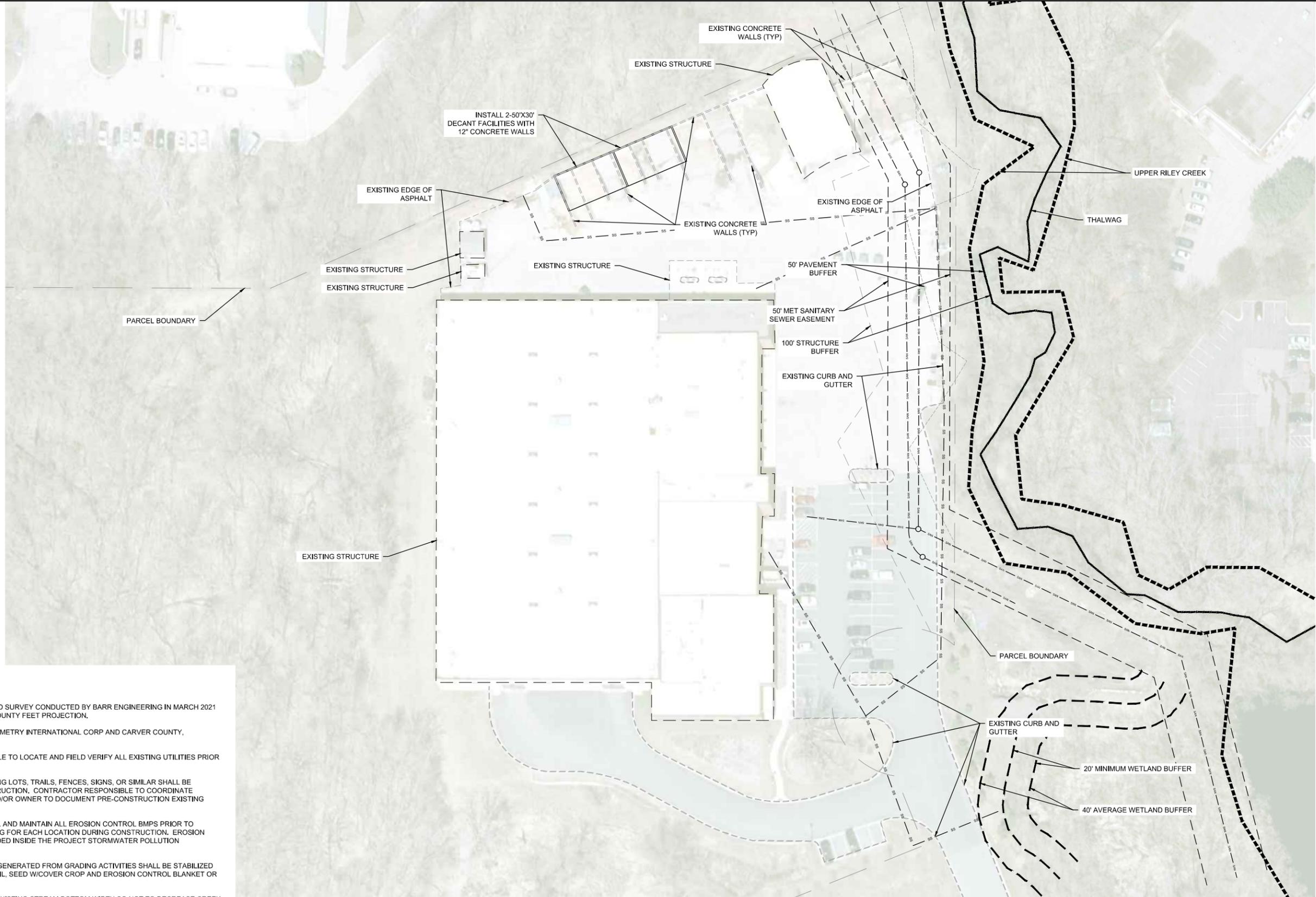
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	DJP	JCO	SAS	08/31/2022	CONCEPT

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINTED NAME \_\_\_\_\_  
 SIGNATURE \_\_\_\_\_  
 DATE \_\_\_\_\_ LICENSE # \_\_\_\_\_

CLIENT	08/31/22								
BID									
CONSTRUCTION RECORD									
RELEASED TO/FOR	A	B	C	0	1	2	3		
DATE RELEASED									

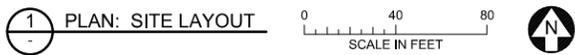
BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-01	REV. No. A

CADD USER: DALE.J.PRICE FILE: I:\DESIGN\23270033\_1\UPPER RILEY CREEK\CONCEPT N\DWG\CONCEPT N\DWG\_PLOT SCALE: 1/2 PLOT DATE: 8/31/2022 11:48 AM



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PRINTED NAME	_____			
SIGNATURE	_____			
DATE	_____ LICENSE # _____			

CLIENT	08/31/22			
BID				
CONSTRUCTION RECORD				
RELEASED TO/FOR	A	B	C	0
DATE RELEASED	1	2	3	

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Scale	AS SHOWN
Date	08/31/2022
Drawn	EPF
Checked	JCO
Designed	BARR
Approved	SAS

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN.

**UPPER RILEY CREEK  
PUBLIC WORKS DECANT FACILITY CONCEPT**  
  
**SITE LAYOUT  
CONCEPT D**

BARR PROJECT No. 23/27-0053.14	
CLIENT PROJECT No.	
DWG. No. C-01	REV. No. A

**ATTACHEMENT B: Attachment B: Cost Estimate  
Concept Comparison Summary**

For Discussion

ATTACHEMENT B: Chanhassen Public Works Facility Decant Options Analysis

ENGINEER'S OPINION OF PROBABLE PROJECT COST

PROJECT: Creek Ecological Enhancement  
 LOCATION: Chanhassne, MN  
 PROJECT #: 1327054.14 032B  
 DATE: 8/25/2022

Engineer's Opinion of Probable Project Cost

Item No.	ITEM DESCRIPTION	UNIT	UNIT COST	Concept A - East of Building		Concept B - NE Corner (single 50'x42'bay)		Concept C - Boneyard (based on City 8/23 sketch)		Concept D: North of Building		NOTES
				ESTIMATED QUANTITY	ITEM COST	ESTIMATED QUANTITY	ITEM COST	ESTIMATED QUANTITY	ITEM COST	ESTIMATED QUANTITY	ITEM COST	
1	Mobilization	LS	10%	1	\$ 42,000.00	1	\$ 31,000.00	1	\$ 45,000.00	1	\$ 44,000.00	1.2,3,4,5
2	Construction Surveying	LS	\$5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1.2,3,4,5
3	Erosion Control and Water Pollution Prevention	LS	\$5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1	\$ 5,000.00	1.2,3,4,5
4	Clearing and Grubbing	AC	\$3,000.00	0	\$ -	0	\$ -	0.09	\$ 275.48	0	\$ -	1.2,3,4,5
5	Removal of Structures and Obstructions	LS	\$6,000.00	1	\$ 6,000.00	1	\$ 6,000.00	1	\$ 3,000.00	1	\$ 10,000.00	1.2,3,4,5
6	Remove Existing berm	CY	\$8.00	0	\$ -	0	\$ -	400	\$ 3,200.00	0	\$ -	1.2,3,4,5
7	Pavement Excavation/Removal Incl. Haul	CY	\$10.00	333	\$ 3,333.33	178	\$ 1,777.78	0	\$ -	333	\$ 3,333.33	1.2,3,4,5
8	Concrete Structure Excavation (Incl. Haul & Disposal)	CY	\$11.00	0	\$ -	0	\$ -	0	\$ -	782	\$ 8,604.44	1.2,3,4,5
9	Curb Removal	LF	\$2.00	150	\$ 300.00	0	\$ -	150	\$ 300.00	0	\$ -	1.2,3,4,5
10		TN	\$27.50		\$ -		\$ -		\$ -		\$ -	1.2,3,4,5
11	HMA Sawcut and Seal	LF	\$3.00	300	\$ 900.00	50	\$ 150.00	0	\$ -	150	\$ 450.00	1.2,3,4,5
12	Bituminous Pavement	TN	\$100.00	141	\$ 14,062.50	45	\$ 4,500.00	293	\$ 29,250.00	141	\$ 14,062.50	1.2,3,4,5
13	Concrete Foundation and Slab for Decant Facility	SF	\$45.00	6000	\$ 270,000.00	4000	\$ 180,000.00	6000	\$ 270,000.00	6000	\$ 270,000.00	Based on Lynden Bid Tab
14	Gravel Backfill for Wall	TN	\$18.50	691	\$ 12,787.20	691	\$ 12,787.20	691	\$ 12,787.20	691	\$ 12,787.20	1.2,3,4,5
15	Metal Roof/Walls, Doors and Support System (Decant Facility)	SF	\$25.00		\$ -		\$ -		\$ -		\$ -	Based on Lynden Bid Tab
16	Corrugated Polyethylene Storm Sewer Pipe, 8-In. Diam.	LF	\$21.00	450	\$ 9,450.00	450	\$ 9,450.00	450	\$ 9,450.00	450	\$ 9,450.00	1.2,3,4,5
17	Sch 40 PVC, 4-In. Diam.	LF	\$15.50	0	\$ -	0	\$ -	0	\$ -	0	\$ -	1.2,3,4,5
18		LF	\$2.00		\$ -		\$ -		\$ -		\$ -	1.2,3,4,5
19	Trench Drain	LF	\$150.00	125	\$ 18,750.00	80	\$ 12,000.00	125	\$ 18,750.00	125	\$ 18,750.00	1.2,3,4,5
20	Catch Basin	EA	\$1,400.00	1	\$ 1,400.00	1	\$ 1,400.00	1	\$ 1,400.00	1	\$ 1,400.00	1.2,3,4,5
21	Manhole 48-In. Diam.	EA	\$5,000.00	2	\$ 10,000.00	2	\$ 10,000.00	2	\$ 10,000.00	2	\$ 10,000.00	1.2,3,4,5
22	Connection to Drainage Structure	EA	\$700.00	1	\$ 700.00	1	\$ 700.00	1	\$ 700.00	1	\$ 700.00	1.2,3,4,5
23	Infiltration Facility	CF	\$30.00	779	\$ 23,375.00	440	\$ 13,200.00	1027	\$ 30,800.00	779	\$ 23,375.00	1.2,3,4,5
24	Decant Effluent Pretreatment System	LS	\$25,000.00	1	\$ 25,000.00	1	\$ 25,000.00	1	\$ 25,000.00	1	\$ 25,000.00	1.2,3,4,5
25	Aluminum Slide Gates	EA	\$1,000.00	4	\$ 4,000.00	4	\$ 4,000.00	4	\$ 4,000.00	4	\$ 4,000.00	1.2,3,4,5
26	Connect to Sanitary Sewer Structure	EA	\$800.00	1	\$ 800.00	1	\$ 800.00	1	\$ 800.00	1	\$ 800.00	1.2,3,4,5
27	Polyethylene Pipe for Water Main, 2-In. Diam.	LF	\$37.00	50	\$ 1,850.00	200	\$ 7,400.00	160	\$ 5,920.00	250	\$ 9,250.00	1.2,3,4,5
28	Post Hydrant	EA	\$1,300.00	2	\$ 2,600.00	2	\$ 2,600.00	2	\$ 2,600.00	2	\$ 2,600.00	1.2,3,4,5
29	Hose Rack Including Hose and Fittings	EA	\$880.00	2	\$ 1,760.00	2	\$ 1,760.00	2	\$ 1,760.00	2	\$ 1,760.00	1.2,3,4,5
30	Bollards	EA	\$180.00	4	\$ 720.00	4	\$ 720.00	4	\$ 720.00	4	\$ 720.00	1.2,3,4,5
31	Ductile Iron Sewer Ptee, 8-in. Diam.	LF	\$37.40	0	\$ -	0	\$ -	0	\$ -	0	\$ -	1.2,3,4,5
32	Bioretention Soil	CY	\$44.50	22	\$ 963.14	12	\$ 543.89	29	\$ 1,269.07	22	\$ 963.14	1.2,3,4,5
	CONSTRUCTION SUBTOTAL				\$461,000.00		\$336,000.00		\$487,000.00		\$482,000.00	
	CONSTRUCTION CONTINGENCY (20%)				\$92,000.00		\$67,000.00		\$97,000.00		\$96,000.00	
	<b>ESTIMATED CONSTRUCTION OPC</b>				<b>\$553,000.00</b>		<b>\$403,000.00</b>		<b>\$584,000.00</b>		<b>\$578,000.00</b>	
	PLANNING, ENGINEERING & DESIGN (20% CONSTRUCTION OPC)				\$83,000.00		\$60,000.00		\$88,000.00		\$87,000.00	
	PERMITTING & REGULATORY APPROVALS (2% CONSTRUCTION OPC)				\$11,000.00		\$8,000.00		\$12,000.00		\$12,000.00	
	CONSTRUCTION MANAGEMENT (10% CONSTRUCTION OPC)				\$55,000.00		\$40,000.00		\$58,000.00		\$58,000.00	
	ESTIMATED TOTAL PROJECT OPC				\$702,000.00		\$511,000.00		\$742,000.00		\$735,000.00	
	ESTIMATED ACCURACY RANGE		-20%		\$562,000.00		\$409,000.00		\$594,000.00		\$588,000.00	
			40%		\$983,000.00		\$716,000.00		\$1,039,000.00		\$1,029,000.00	

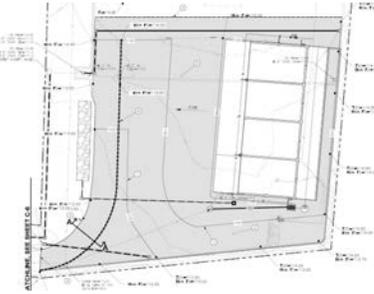
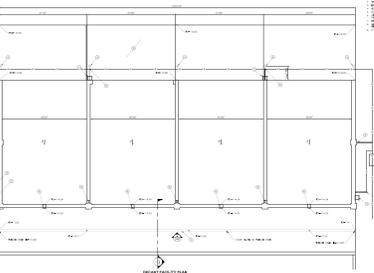
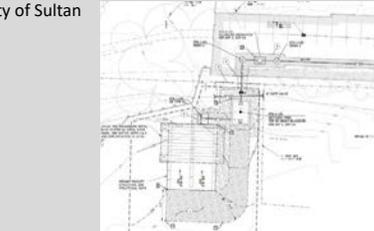
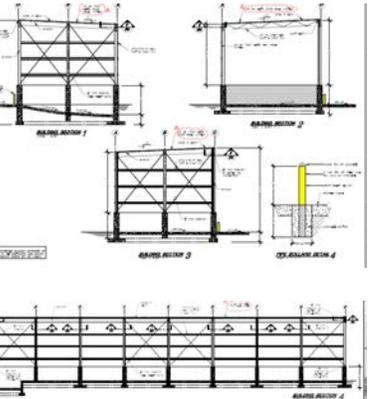
Notes

- Limited design work completed (<5%).
- Quantities based on design work completed.
- Unit prices based on information available at this time and referenced from benchmarking from similar projects.
- No soil borings collected.
- This feasibility-level (Class 5, <5% design completion per ACE International Recommended Practice No. 17R-97, 2011) cost estimate is based on concept-level designs, alignments, quantities and unit prices. Costs will change with further design. Time value-of-money escalation costs are not included. A construction schedule is not available at this time. Contingency is an allowance for the net sum of costs that will be in the Final Total Project Cost at the time of the completion of design, but are not included at this level of project definition. The estimated accuracy range for the Total Project Cost as the project is defined is -20% to +40%. The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The contingency and the accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency. Operation and Maintenance costs are not included.
- Estimate costs are to design, construct, and permit the project as currently designed (approximately 1-15%). The estimated costs do not include maintenance, monitoring or additional tasks following construction.

**Attachment C: Summary of Benchmarking Analysis  
and Supporting Information** (bid tabs, drawings, etc.)

For Discussion

Supporting Benchmarking Analysis For Decant Facilities (Information source: construction drawings and bid tabs)

Facility Location	Year Constructed	Area (sq ft)	Construction Cost	Construction cost per Sq ft	Comments
	2020	8,150	\$1,789,100	\$219.52	5-bay decant facility, eight storage bays, and civil site work (Designer - Pace Engineers, Inc.)
 	2021	7,875	\$1,005,510.33	\$127.68	4-bay decant facility and civil site work (Bid Schedule A only) (Designer - Pace Engineers, Inc.)
	2021	7,875	\$344,000.00	\$43.68	4-bay Decant Facility Concrete (Bid Schedule A only)(Designer - Pace Engineers, Inc.)
	2021	7,875	\$200,000.00	\$25.40	Schedule A only - Decant Facility Metal Roof and walls (Designer - Pace Engineers, Inc.)
	2020	1,344	\$399,383.26	\$297.16	2-Bay Eco-Block wall decant facility and civil site work (Designers - murraysmith)
	2022	4,320	\$ 689,533.00	\$159.61	8-bay decant facility and storage structure only (Designers: Jones & Associates)
	2022	4,320	\$ 1,081,619.10	\$250.37	8-bay decant facility and storage structure plus civil site work (Designers: Jones & Associates)
<b>Average</b>				<b>\$223.69</b>	Decant facility with roof and civil site work

Supporting Benchmarking Analysis For Decant Facilities (Information source <https://grayandosborne.net/utilities.php>)

Facility Location	Year Constructed	Area (sq ft)	Construction Cost	Construction cost per Sq ft	Descriptions
 <p>City of Bainbridge Island</p>	2006	10,200	\$1,216,511	\$119.27	The project included the construction of a 10,200 square-foot decant station. The major items included concrete foundation with below-grade detention bays, metal building system, and a concrete tipping floor. Treatment included flow control settling and decant, sand filtration, oil/water separation, and discharge to a bioswale. The system has since been changed to discharge to the sanitary sewer system. The facilities provided for the separate treatment of uncontaminated clean dig and stormwater material from catch basins and contaminated material from their wastewater facilities.
 <p>City of Battle Ground</p>	2010	1,500	\$243,635	\$162.42	Gray & Osborne designed a new 50-foot by 30-foot decant facility constructed of concrete foundation mat slab and walls with a moment steel frame roof system. In addition, the project included electrical work to provide lighting and power to the facility, site restoration and landscaping, and a water supply system to the facility.
 <p>City of Granite Falls</p>	2012	2,010	\$504,982	\$251.23	The project included the construction of a 2,010 square-foot decant facility. The major items included below-grade detention bays, a drying bay, metal building system, media filter treatment system, sewer, storm, and water utilities, site restoration, and landscaping.
 <p>City of Lacey</p>	2016	2,600	\$279,048	\$107.33	Gray & Osborne provided design and construction administration services to the City of Lacey to support the construct of a 2,600 square-foot decant station. The facility included a concrete pad, ecology block walls, fabric canopy, solids settling vault, associated sanitary sewer and water systems, storm infiltration system, and associated site work and restoration.
 <p>City of Marysville</p>	2014	2,000	\$960,000	\$480.00	Gray & Osborne provided planning, design, and construction administration services to the City of Marysville to retrofit their existing decant facility and material storage areas at the City's Public Works site. Gray & Osborne worked with the City to develop a master site plan that allowed for the functional use of the City's current equipment and operations, reduced risk of pollutants entering nearby receiving waters, and allowed for the retrofit/ addition of material storage areas and accommodating future operational needs as additional funds become available. This information was summarized in a predesign report. The project included the construction of a 2,000 square-foot decant facility with two decant bays, a holding bay, and a dry storage area. An optional third decant bay was also included in the design, but was not constructed due to limited available funds

BID TABULATION

Owner: City of Lynden  
 Project: Decant Facility  
 Engineers: PACE Engineers, Inc.

Bid Date: 01/28/2021  
 Bid Time: 10:00 a.m.  
 Job No. 19502

				ENGINEER'S ESTIMATE		Colacurio Brothers		Razz Construction		Fisher Construction		Tiger Construction		McClure & Sons		Granite Construction		Faber Construction		Janicki General Contracting		Oceanside Construction		Premium Services	
SCHEDULE A																									
ITEM NO.	ITEM OR TASK DESCRIPTION	QTY	UNIT	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST
A-1	Minor Changes	1	FA	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00	\$15,000.00	\$ 15,000.00
A-2	Construction Surveying	1	LS	\$5,000.00	\$ 5,000.00	\$5,000.00	\$ 5,000.00	\$8,000.00	\$ 8,000.00	\$6,102.00	\$ 6,102.00	\$3,970.00	\$ 3,970.00	\$4,250.00	\$ 4,250.00	\$6,200.00	\$ 6,200.00	\$4,097.30	\$ 4,097.30	\$6,195.70	\$ 6,195.70	\$5,000.00	\$ 5,000.00	\$5,500.00	\$ 5,500.00
A-3	SPCC Plan	1	LS	\$3,000.00	\$ 3,000.00	\$200.00	\$ 200.00	\$1,000.00	\$ 1,000.00	\$270.00	\$ 270.00	\$244.00	\$ 244.00	\$500.00	\$ 500.00	\$1,500.00	\$ 1,500.00	\$946.57	\$ 946.57	\$902.29	\$ 902.29	\$500.00	\$ 500.00	\$1,000.00	\$ 1,000.00
A-4	Mobilization	1	LS	\$51,795.60	\$ 51,795.60	\$75,000.00	\$ 75,000.00	\$113,000.00	\$ 113,000.00	\$100,753.00	\$ 100,753.00	\$28,980.00	\$ 28,980.00	\$79,815.00	\$ 79,815.00	\$100,000.00	\$ 100,000.00	\$29,500.00	\$ 29,500.00	\$6,015.24	\$ 6,015.24	\$50,000.00	\$ 50,000.00	\$115,000.00	\$ 115,000.00
A-5	Clearing and Grubbing	1	LS	\$3,000.00	\$ 3,000.00	\$2,000.00	\$ 2,000.00	\$5,000.00	\$ 5,000.00	\$4,660.00	\$ 4,660.00	\$970.00	\$ 970.00	\$2,500.00	\$ 2,500.00	\$1,500.00	\$ 1,500.00	\$2,251.00	\$ 2,251.00	\$2,213.61	\$ 2,213.61	\$1,000.00	\$ 1,000.00	\$10,000.00	\$ 10,000.00
A-6	Removal of Structures and Obstructions	1	LS	\$5,000.00	\$ 5,000.00	\$6,000.00	\$ 6,000.00	\$25,000.00	\$ 25,000.00	\$16,299.00	\$ 16,299.00	\$19,700.00	\$ 19,700.00	\$13,000.00	\$ 13,000.00	\$22,000.00	\$ 22,000.00	\$20,813.00	\$ 20,813.00	\$18,707.40	\$ 18,707.40	\$8,800.00	\$ 8,800.00	\$10,000.00	\$ 10,000.00
A-7	Channel Excavation	1	LS	\$6,000.00	\$ 6,000.00	\$2,000.00	\$ 2,000.00	\$10,000.00	\$ 10,000.00	\$5,624.00	\$ 5,624.00	\$4,330.00	\$ 4,330.00	\$3,400.00	\$ 3,400.00	\$6,800.00	\$ 6,800.00	\$2,275.00	\$ 2,275.00	\$8,553.67	\$ 8,553.67	\$15,000.00	\$ 15,000.00	\$10,000.00	\$ 10,000.00
A-8	Roadway Excavation Incl. Haul	600	CY	\$15.00	\$ 9,000.00	\$10.00	\$ 6,000.00	\$30.00	\$ 18,000.00	\$28.06	\$ 16,836.00	\$4.40	\$ 2,640.00	\$32.00	\$ 19,200.00	\$26.00	\$ 15,600.00	\$16.28	\$ 9,768.00	\$35.41	\$ 21,246.00	\$17.00	\$ 10,200.00	\$45.00	\$ 27,000.00
A-9	Structure Excavation Class A Incl. Haul	1,100	CY	\$20.00	\$ 22,000.00	\$11.00	\$ 12,100.00	\$1.00	\$ 1,100.00	\$21.17	\$ 23,287.00	\$4.40	\$ 4,840.00	\$35.00	\$ 38,500.00	\$26.00	\$ 28,600.00	\$20.70	\$ 22,770.00	\$42.05	\$ 46,255.00	\$20.00	\$ 22,000.00	\$12.00	\$ 13,200.00
A-10	Shoring or Extra Excavation Class A	1	LS	\$10,000.00	\$ 10,000.00	\$500.00	\$ 500.00	\$2,500.00	\$ 2,500.00	\$1,620.00	\$ 1,620.00	\$12,250.00	\$ 12,250.00	\$5,000.00	\$ 5,000.00	\$1,000.00	\$ 1,000.00	\$2,223.00	\$ 2,223.00	\$2,406.10	\$ 2,406.10	\$1,000.00	\$ 1,000.00	\$1,000.00	\$ 1,000.00
A-11	Crushed Surfacing Base Course	740	TN	\$30.00	\$ 22,200.00	\$27.50	\$ 20,350.00	\$31.00	\$ 22,940.00	\$33.10	\$ 24,494.00	\$25.70	\$ 19,018.00	\$34.00	\$ 25,160.00	\$30.00	\$ 22,200.00	\$22.35	\$ 16,539.00	\$40.90	\$ 30,266.00	\$40.00	\$ 29,600.00	\$40.00	\$ 29,600.00
A-12	HMA Sawcut and Seal	290	LF	\$30.00	\$ 8,700.00	\$3.00	\$ 870.00	\$6.00	\$ 1,740.00	\$9.72	\$ 2,818.80	\$3.00	\$ 870.00	\$10.00	\$ 2,900.00	\$2.00	\$ 580.00	\$5.61	\$ 1,626.90	\$1.20	\$ 348.00	\$1.00	\$ 290.00	\$1.00	\$ 290.00
A-13	HMA Cl. 1/2 In. PG 64-22	460	TN	\$135.00	\$ 62,100.00	\$100.00	\$ 46,000.00	\$105.00	\$ 48,300.00	\$100.44	\$ 46,202.40	\$103.25	\$ 47,495.00	\$108.00	\$ 49,680.00	\$93.00	\$ 42,780.00	\$106.64	\$ 49,054.40	\$114.29	\$ 52,573.40	\$111.00	\$ 51,060.00	\$107.00	\$ 49,220.00
A-14	Concrete Foundation and Slab for Decant Facility	1	LS	\$280,000.00	\$ 280,000.00	\$344,000.00	\$ 344,000.00	\$355,000.00	\$ 355,000.00	\$293,751.00	\$ 293,751.00	\$320,000.00	\$ 320,000.00	\$268,000.00	\$ 268,000.00	\$326,000.00	\$ 326,000.00	\$247,186.71	\$ 247,186.71	\$386,977.38	\$ 386,977.38	\$400,000.00	\$ 400,000.00	\$450,000.00	\$ 450,000.00
A-15	Gravel Backfill for Wall	100	TN	\$30.00	\$ 3,000.00	\$18.50	\$ 1,850.00	\$31.00	\$ 3,100.00	\$32.29	\$ 3,229.00	\$29.50	\$ 2,950.00	\$378.00	\$ 37,800.00	\$14.00	\$ 1,400.00	\$20.42	\$ 2,042.00	\$34.89	\$ 3,489.00	\$30.00	\$ 3,000.00	\$22.00	\$ 2,200.00
A-16	Metal Roof/Walls, Doors and Support System (Decant Facility)	1	LS	\$200,000.00	\$ 200,000.00	\$200,000.00	\$ 200,000.00	\$130,000.00	\$ 130,000.00	\$129,663.00	\$ 129,663.00	\$280,500.00	\$ 280,500.00	\$160,000.00	\$ 160,000.00	\$218,000.00	\$ 218,000.00	\$307,997.76	\$ 307,997.76	\$247,768.13	\$ 247,768.13	\$200,000.00	\$ 200,000.00	\$300,000.00	\$ 300,000.00
A-17	Corrugated Polyethylene Storm Sewer Pipe, 8-In. Diam.	450	LF	\$40.00	\$ 18,000.00	\$21.00	\$ 9,450.00	\$27.00	\$ 12,150.00	\$51.00	\$ 22,950.00	\$23.70	\$ 10,665.00	\$13.00	\$ 5,850.00	\$21.00	\$ 9,450.00	\$32.34	\$ 14,553.00	\$24.60	\$ 11,070.00	\$55.00	\$ 24,750.00	\$30.00	\$ 13,500.00
A-18	Sch 40 PVC, 4-In. Diam.	135	LF	\$35.00	\$ 4,725.00	\$15.50	\$ 2,092.50	\$19.00	\$ 2,565.00	\$41.86	\$ 5,651.10	\$19.75	\$ 2,666.25	\$9.00	\$ 1,215.00	\$21.00	\$ 2,835.00	\$29.48	\$ 3,979.80	\$20.88	\$ 2,818.80	\$17.00	\$ 2,295.00	\$30.00	\$ 4,050.00
A-19	Testing Storm Sewer Pipe	895	LF	\$50.00	\$ 44,750.00	\$2.00	\$ 1,790.00	\$2.50	\$ 2,237.50	\$3.06	\$ 2,738.70	\$1.20	\$ 1,074.00	\$3.10	\$ 2,774.50	\$1.00	\$ 895.00	\$1.08	\$ 966.60	\$4.81	\$ 4,304.95	\$1.00	\$ 895.00	\$1.00	\$ 895.00
A-20	Trench Drain	125	LF	\$50.00	\$ 6,250.00	\$150.00	\$ 18,750.00	\$165.00	\$ 20,625.00	\$79.14	\$ 9,892.50	\$185.00	\$ 23,125.00	\$283.00	\$ 35,375.00	\$88.00	\$ 11,000.00	\$358.17	\$ 44,771.25	\$156.40	\$ 19,550.00	\$85.00	\$ 10,625.00	\$85.00	\$ 10,625.00
A-21	Catch Basin Type 1	9	EA	\$4,500.00	\$ 40,500.00	\$1,400.00	\$ 12,600.00	\$1,750.00	\$ 15,750.00	\$1,306.68	\$ 11,760.12	\$1,525.00	\$ 13,725.00	\$1,100.00	\$ 9,900.00	\$1,500.00	\$ 13,500.00	\$1,553.00	\$ 13,977.00	\$762.46	\$ 6,862.14	\$900.00	\$ 8,100.00	\$1,200.00	\$ 10,800.00
A-22	Manhole 48-In. Diam. Type 1	1	EA	\$5,000.00	\$ 5,000.00	\$3,500.00	\$ 3,500.00	\$5,200.00	\$ 5,200.00	\$3,867.00	\$ 3,867.00	\$3,350.00	\$ 3,350.00	\$2,900.00	\$ 2,900.00	\$3,800.00	\$ 3,800.00	\$3,802.00	\$ 3,802.00	\$2,980.89	\$ 2,980.89	\$3,600.00	\$ 3,600.00	\$3,500.00	\$ 3,500.00
A-23	Connection to Drainage Structure	1	EA	\$1,000.00	\$ 1,000.00	\$700.00	\$ 700.00	\$490.00	\$ 490.00	\$559.00	\$ 559.00	\$1,265.00	\$ 1,265.00	\$2,000.00	\$ 2,000.00	\$200.00	\$ 200.00	\$1,608.00	\$ 1,608.00	\$1,203.05	\$ 1,203.05	\$100.00	\$ 100.00	\$500.00	\$ 500.00
A-24	Infiltration Facility	1	LS	\$20,000.00	\$ 20,000.00	\$5,500.00	\$ 5,500.00	\$11,000.00	\$ 11,000.00	\$12,474.00	\$ 12,474.00	\$9,010.00	\$ 9,010.00	\$7,200.00	\$ 7,200.00	\$7,000.00	\$ 7,000.00	\$7,672.00	\$ 7,672.00	\$11,705.66	\$ 11,705.66	\$16,000.00	\$ 16,000.00	\$20,000.00	\$ 20,000.00
A-25	Decant Effluent Pretreatment System	1	LS	\$28,000.00	\$ 28,000.00	\$23,000.00	\$ 23,000.00	\$25,000.00	\$ 25,000.00	\$34,722.00	\$ 34,722.00	\$20,400.00	\$ 20,400.00	\$23,000.00	\$ 23,000.00	\$35,000.00	\$ 35,000.00	\$24,097.00	\$ 24,097.00	\$31,946.95	\$ 31,946.95	\$33,000.00	\$ 33,000.00	\$35,000.00	\$ 35,000.00
A-26	Aluminum Slide Gates	7	EA	\$1,500.00	\$ 10,500.00	\$1,000.00	\$ 7,000.00	\$3,733.00	\$ 26,131.00	\$2,721.60	\$ 19,051.20	\$2,300.00	\$ 16,100.00	\$3,900.00	\$ 27,300.00	\$3,500.00	\$ 24,500.00	\$3,150.00	\$ 22,050.00	\$2,817.71	\$ 19,723.97	\$2,500.00	\$ 17,500.00	\$2,484.00	\$ 17,388.00
A-27	Connect to Sanitary Sewer Structure	1	EA	\$2,000.00	\$ 2,000.00	\$800.00	\$ 800.00	\$490.00	\$ 490.00	\$559.00	\$ 559.00	\$1,360.00	\$ 1,360.00	\$2,100.00	\$ 2,100.00	\$450.00	\$ 450.00	\$1,608.00	\$ 1,608.00	\$1,203.05	\$ 1,203.05	\$100.00	\$ 100.00	\$800.00	\$ 800.00
A-28	Polyethylene (PE) Pipe for Water Main, 2-In. Diam.	250	LF	\$25.00	\$ 6,250.00	\$37.00	\$ 9,250.00	\$37.00	\$ 9,250.00	\$61.34	\$ 15,335.00	\$62.00	\$ 15,500.00	\$39.00	\$ 9,750.00	\$65.00	\$ 16,250.00	\$54.79	\$ 13,697.50	\$20.79	\$ 5,197.50	\$38.00	\$ 9,500.00	\$40.00	\$ 10,000.00
A-29	Post Hydrant	5	EA	\$150.00	\$ 750.00	\$1,300.00	\$ 6,500.00	\$1,325.00	\$ 6,625.00	\$1,219.32	\$ 6,096.60	\$1,230.00	\$ 6,150.00	\$4,500.00	\$ 22,500.00	\$1,400.00	\$ 7,000.00	\$1,542.00	\$ 7,710.00	\$7,341.68	\$ 36,708.40	\$1,500.00	\$ 7,500.00	\$1,000.00	\$ 5,000.00
A-30	Hose Rack Including Hose and Fittings	4	EA	\$200.00	\$ 800.00	\$880.00	\$ 3,520.00	\$720.00	\$ 2,880.00	\$763.83	\$ 3,055.32	\$790.00	\$ 3,160.00	\$1,400.00	\$ 5,600.00	\$850.00	\$ 3,400.00	\$1,014.00	\$ 4,056.00	\$1,208.32	\$ 4,833.28	\$700.00	\$ 2,800.00	\$1,000.00	\$ 4,000.00
A-31	Bollards	5	EA	\$500.00	\$ 2,500.00	\$180.00	\$ 900.00	\$1,629.00	\$ 8,145.00	\$902.88	\$ 4,514.40	\$925.00	\$ 4,625.00	\$700.00	\$ 3,500.00	\$1,300.00	\$ 6,500.00	\$977.40	\$ 4,887.00	\$451.14	\$ 2,255.70	\$900.00	\$ 4,500.00	\$1,000.00	\$ 5,000.00
A-32	Ductile Iron Sewer Pipe, 8-in. Diam.	310	LF	\$65.00	\$ 20,150.00	\$37.40	\$ 11,594.00	\$50.00	\$ 15,500.00	\$58.74	\$ 18,209.40	\$43.25	\$ 13,407.50	\$48.00	\$ 14,880.00	\$48.00	\$ 14,880.00	\$52.16	\$ 16,169.60	\$35.60	\$ 11,036.00	\$76.00	\$ 23,560.00	\$55.00	\$ 17,050.00
A-33	Bioretention Soil	100	CY	\$25.00	\$ 2,500.00	\$44.50	\$ 4,450.00	\$98.00	\$ 9,800.00	\$124.43	\$ 12,443.00	\$93.50	\$ 9,350.00	\$290.00	\$ 29,000.00	\$70.00	\$ 7,000.00	\$169.86	\$ 16,986.00	\$42.08	\$ 4,208.00	\$100.00	\$ 10,000.00	\$55.00	\$ 5,500

BID TABULATION

Owner: City of Lynden  
 Project: Decant Facility  
 Engineers: PACE Engineers, Inc.

Bid Date: 01/28/2021  
 Bid Time: 10:00 a.m.  
 Job No. 19502

			ENGINEER'S ESTIMATE	Colacurio Brothers	Razz Construction	Fisher Construction	Tiger Construction	McClure & Sons	Granite Construction	Faber Construction	Janicki General Contracting	Oceanside Construction	Premium Services
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SCHEDULE B																									
ITEM NO.	ITEM OR TASK DESCRIPTION	QTY	UNIT	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST
B-1	Clearing and Grubbing	1	LS	\$1,000.00	\$ 1,000.00	\$400.00	\$ 400.00	\$100.00	\$ 100.00	\$4,090.00	\$ 4,090.00	\$975.00	\$ 975.00	\$210.00	\$ 210.00	\$1,500.00	\$ 1,500.00	\$2,475.00	\$ 2,475.00	\$1,202.17	\$ 1,202.17	\$1,000.00	\$ 1,000.00	\$2,000.00	\$ 2,000.00
B-2	Structure Excavation Class A Incl. Haul	340	CY	\$20.00	\$ 6,800.00	\$11.00	\$ 3,740.00	\$1.00	\$ 340.00	\$23.84	\$ 8,105.60	\$4.40	\$ 1,496.00	\$31.00	\$ 10,540.00	\$26.00	\$ 8,840.00	\$20.71	\$ 7,041.40	\$42.02	\$ 14,286.80	\$36.00	\$ 12,240.00	\$12.00	\$ 4,080.00
B-3	Shoring or Extra Excavation Class A	1	LS	\$2,000.00	\$ 2,000.00	\$500.00	\$ 500.00	\$1.00	\$ 1.00	\$918.00	\$ 918.00	\$1,600.00	\$ 1,600.00	\$500.00	\$ 500.00	\$500.00	\$ 500.00	\$741.00	\$ 741.00	\$601.09	\$ 601.09	\$6,000.00	\$ 6,000.00	\$100.00	\$ 100.00
B-4	Concrete Foundation and Slab for Vehicle Storage	1	LS	\$70,000.00	\$ 70,000.00	\$75,000.00	\$ 75,000.00	\$34,000.00	\$ 34,000.00	\$68,363.00	\$ 68,363.00	\$32,500.00	\$ 32,500.00	\$36,000.00	\$ 36,000.00	\$89,000.00	\$ 89,000.00	\$109,447.05	\$ 109,447.05	\$41,420.92	\$ 41,420.92	\$92,000.00	\$ 92,000.00	\$62,000.00	\$ 62,000.00
B-5	Metal Roof/Walls, Doors and Support System for Vehicle Storage	1	LS	\$100,000.00	\$ 100,000.00	\$76,000.00	\$ 76,000.00	\$42,500.00	\$ 42,500.00	\$70,986.00	\$ 70,986.00	\$81,150.00	\$ 81,150.00	\$85,000.00	\$ 85,000.00	\$62,000.00	\$ 62,000.00	\$114,197.04	\$ 114,197.04	\$83,831.22	\$ 83,831.22	\$118,000.00	\$ 118,000.00	\$80,000.00	\$ 80,000.00
B-6	Seeding, Fertilizing & Mulch	322	SY	\$5.00	\$ 1,610.00	\$4.85	\$ 1,561.70	\$5.00	\$ 1,610.00	\$9.34	\$ 3,007.48	\$4.90	\$ 1,577.80	\$13.00	\$ 4,186.00	\$5.00	\$ 1,610.00	\$11.23	\$ 3,616.06	\$17.86	\$ 5,750.92	\$5.00	\$ 1,610.00	\$5.00	\$ 1,610.00
B-7	Arborist Wood Chip Mulch	20	CY	\$10.00	\$ 200.00	\$91.00	\$ 1,820.00	\$95.00	\$ 1,900.00	\$81.00	\$ 1,620.00	\$91.35	\$ 1,827.00	\$80.00	\$ 1,600.00	\$106.00	\$ 2,120.00	\$112.25	\$ 2,245.00	\$76.46	\$ 1,529.20	\$98.00	\$ 1,960.00	\$100.00	\$ 2,000.00
B-8	Fine Compost	20	CY	\$5.00	\$ 100.00	\$104.00	\$ 2,080.00	\$109.00	\$ 2,180.00	\$81.00	\$ 1,620.00	\$104.40	\$ 2,088.00	\$50.00	\$ 1,000.00	\$120.00	\$ 2,400.00	\$112.25	\$ 2,245.00	\$71.65	\$ 1,433.00	\$112.00	\$ 2,240.00	\$100.00	\$ 2,000.00
B-9	PSIPE "Arbor Vitae (Min. 5 ft. height)"	123	EA	\$10.00	\$ 1,230.00	\$60.00	\$ 7,380.00	\$62.00	\$ 7,626.00	\$131.76	\$ 16,206.48	\$59.80	\$ 7,355.40	\$410.00	\$ 50,430.00	\$65.00	\$ 7,995.00	\$196.45	\$ 24,163.35	\$41.48	\$ 5,102.04	\$64.00	\$ 7,872.00	\$60.00	\$ 7,380.00
SUBTOTAL				\$ 182,940.00		\$ 168,481.70		\$ 90,257.00		\$ 174,916.56		\$ 130,569.20		\$ 189,466.00		\$ 175,965.00		\$ 266,170.90		\$ 155,157.36		\$ 242,922.00		\$ 161,170.00	
8.7% SALES TAX				\$ 15,915.78		\$ 14,657.91		\$ 7,852.36		\$ 15,217.74		\$ 11,359.52		\$ 16,483.54		\$ 15,308.96		\$ 23,156.87		\$ 13,498.69		\$ 21,134.21		\$ 14,021.79	
TOTAL SCHEDULE B				\$ 198,855.78		\$ 183,139.61		\$ 98,109.36		\$ 190,134.30		\$ 141,928.72		\$ 205,949.54		\$ 191,273.96		\$ 289,327.77		\$ 168,656.05		\$ 264,056.21		\$ 175,191.79	

SCHEDULE A	\$ 1,080,011.24	\$ 1,005,510.33	\$ 1,118,869.21	\$ 1,040,318.72	\$ 1,092,005.36	\$ 1,100,750.01	\$ 1,143,110.94	\$ 1,092,147.37	\$ 1,222,617.88	\$ 1,170,237.03	\$ 1,406,032.33
SCHEDULE B	\$ 198,855.78	\$ 183,139.61	\$ 98,109.36	\$ 190,134.30	\$ 141,928.72	\$ 205,949.54	\$ 191,273.96	\$ 289,327.77	\$ 168,656.05	\$ 264,056.21	\$ 175,191.79
TOTAL BID	\$ 1,278,867.02	\$ 1,188,649.94	\$ 1,216,978.57	\$ 1,230,453.02	\$ 1,233,934.08	\$ 1,306,699.55	\$ 1,334,384.90	\$ 1,381,475.14	\$ 1,391,273.93	\$ 1,434,293.24	\$ 1,581,224.12

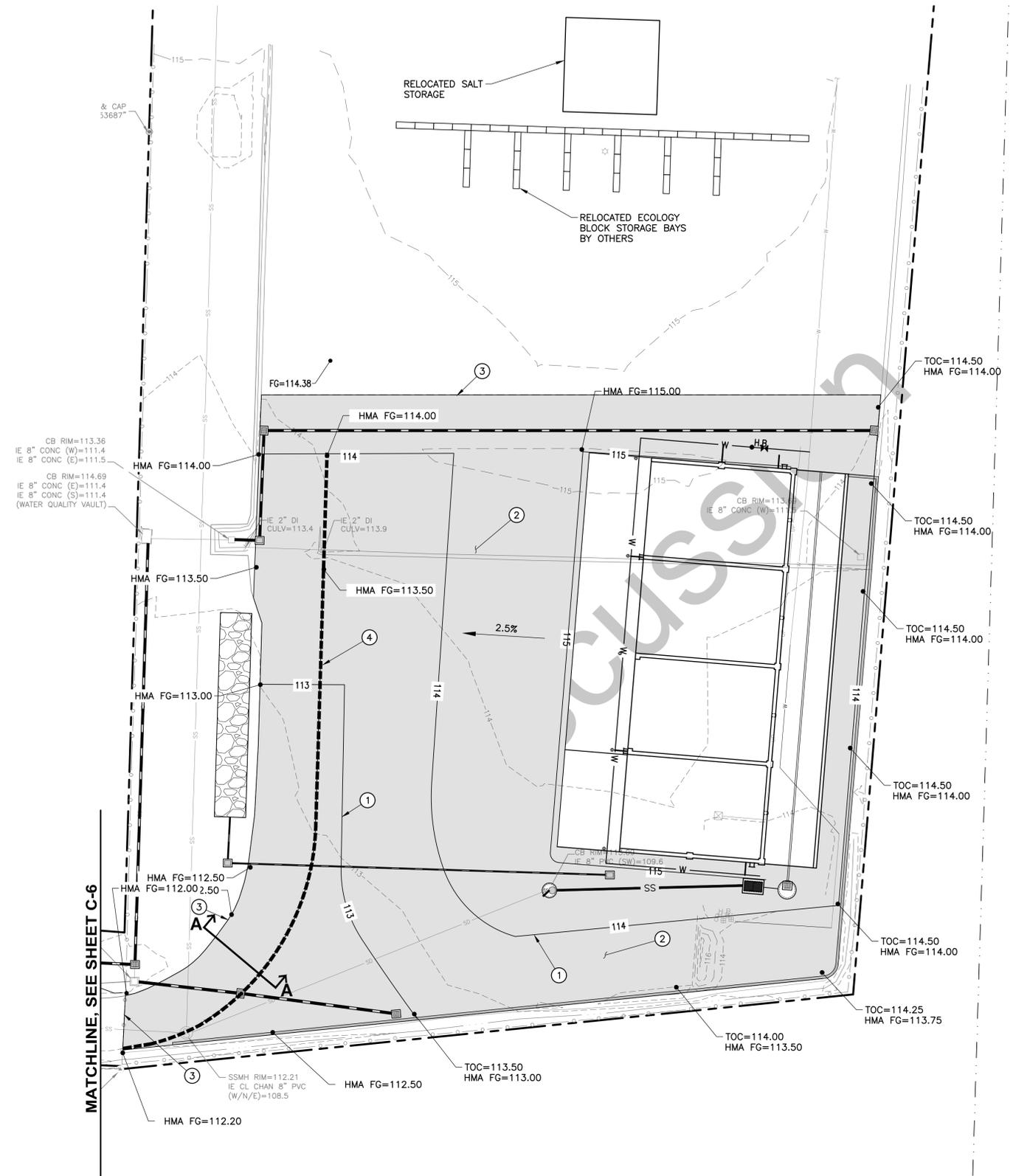
Error in Bid

I hereby certify that this tabulation represents all bids received and that the total bid prices have been checked or corrected based on the unit prices provided in the bids. Corrections did not change the order of the bids, unless noted otherwise.

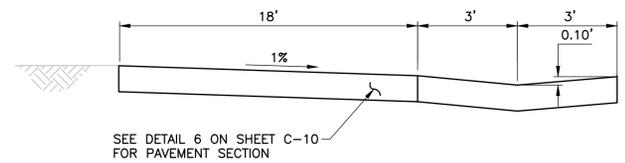


EXPIRES: 11/14/21

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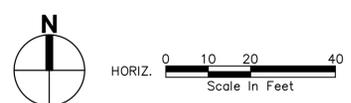


- # KEYNOTES**
1. FINISHED GRADE CONTOUR.
  2. SEE SHEET C-10 FOR TYPICAL ASPHALT PAVEMENT SECTION.
  3. MATCH EXISTING GRADE AT ASPHALT EDGE
  4.  $\text{C}$  ASPHALT GUTTER TO COLLECT RUNOFF. DETAIL 1 THIS SHEET



**A TYPICAL ACCESS ROAD**  
 NTS

MATCHLINE, SEE SHEET C-6



**CALL BEFORE YOU DIG 811**  
 UNDERGROUND SERVICE (USA)



**BID SET**

DESIGNED	MA				
DRAWN					
CHECKED					
SYM		REVISION	DATE	BY	APP'D

**PACE**  
 An Engineering Services Company

11255 Kirkland Way, Suite 300  
 Kirkland, WA 98033  
 p. 425.827.2014 | f. 425.827.5043  
 Civil | Structural | Planning | Survey  
 www.paceengrs.com

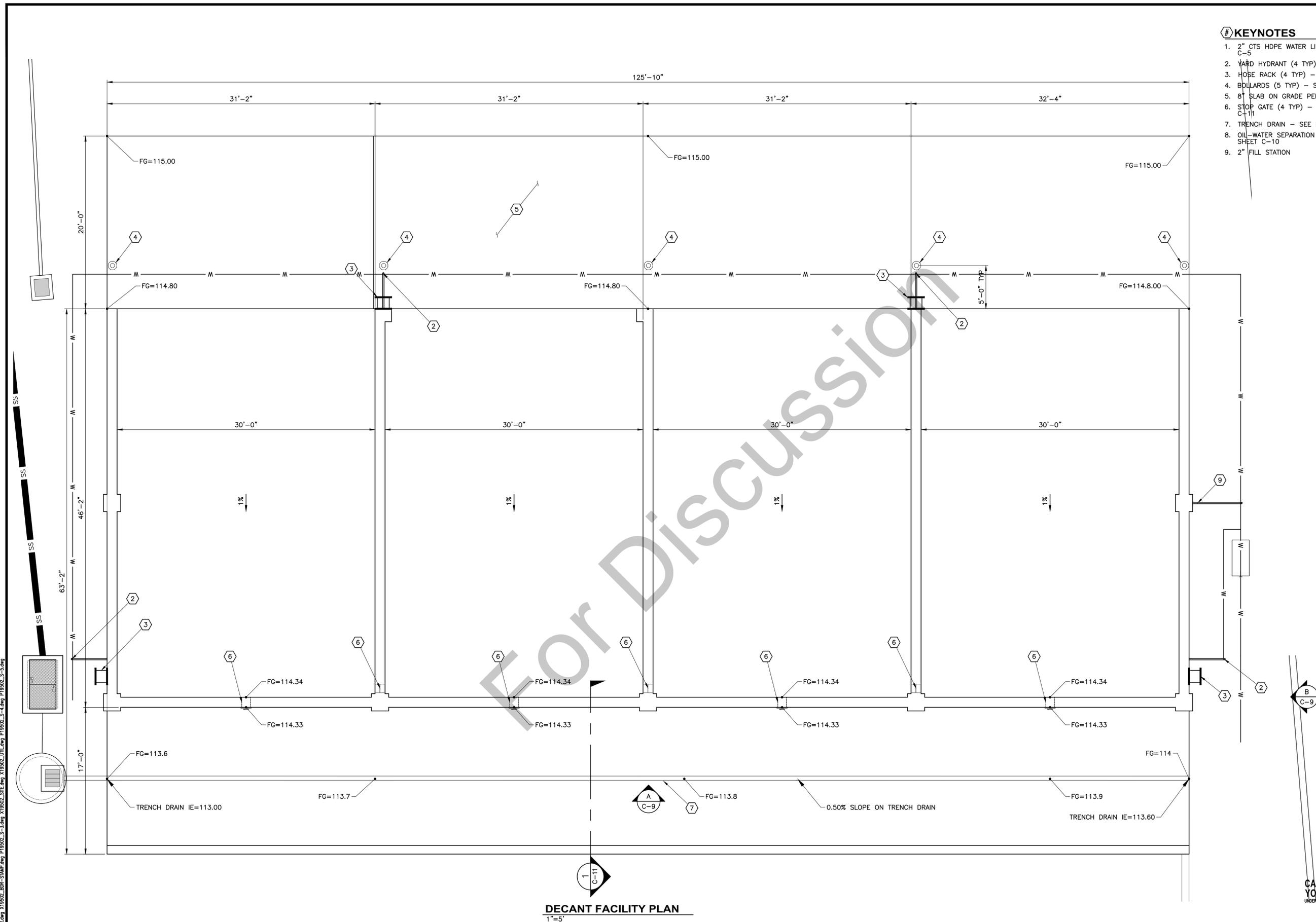
<b>VERIFY SCALE</b> BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DATE	12/10/20
	SCALE	AS SHOWN

**CITY OF LYNDEN  
 DECANT FACILITY  
 GRADING SITE PLAN**

PAGE PROJECT NO.	19502
DWG NAME: P19502_GRADE	
SHEET	C-7 OF 27

**# KEYNOTES**

1. 2" CTS HDPE WATER LINE - SEE CONTINUATION ON SHEET C-5
2. YARD HYDRANT (4 TYP) - SEE DETAIL 2 ON SHEET C-10
3. HOSE RACK (4 TYP) - SEE DETAIL 1 ON SHEET C-10
4. BOLLARDS (5 TYP) - SEE DETAIL 3 ON SHEET C-10
5. 8" SLAB ON GRADE PER S-3 AND S-7.
6. STOP GATE (4 TYP) - SEE DETAIL 1 AND 2 ON SHEET C-11
7. TRENCH DRAIN - SEE DETAIL 4 ON SHEET C-11
8. OIL-WATER SEPARATION CONFIGURATION - SEE DETAIL 5 ON SHEET C-10
9. 2" FILL STATION



**DECANT FACILITY PLAN**  
1"=5'

CALL BEFORE YOU DIG 811  
UNDERGROUND SERVICE (USA)



**BID SET**

FILE NAME: P:\19502\_LYNDEN\_DECANT\_FACILITY\CAD\ENGINEERING\DWG\19502\_FACILITY.DWG  
 SAVE TIME: 12/17/2020 12:42:26 PM PLOT TIME: 12/17/2020 10:26 AM  
 SHEET PLT5: X:\19502\_EBRG\19502\_EBRG-STAMP.dwg P19502\_S-3.dwg X19502\_SITE.dwg X19502\_UML.dwg P19502\_S-4.dwg P19502\_S-5.dwg

DESIGNED	MA				
DRAWN					
CHECKED					
SYM		REVISION	DATE	BY	APP'D

**PACE**  
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11255 Kirkland Way, Suite 300  
Kirkland, WA 98033  
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<b>VERIFY SCALE</b> BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DATE	12/10/20
	SCALE	AS SHOWN

**CITY OF LYNDEN**  
**DECANT FACILITY**  
**DECANT FACILITY PLAN**

PAGE PROJECT NO.	19502
DWG NAME: P19502_FACILITY	
SHEET	C-8 OF 27

## BID OPENING RESULTS

City of Sultan  
 Storm water Decant Facility  
 January 14, 2020 - 2:00 PM

CONTRACTOR	APPARENT BID (Including Tax)	Bond Included	Statement of Qualifications	Acknowledged Addendum	Statement of proposed sub- contractors	Documents Signed
	TOTAL					
Agostino Const.	\$ 454,475 <sup>50</sup>	✓	✓	✓	✓	✓
Allied Const.	\$ 461,527 <sup>80</sup>	✓	✓	✓	✓	✓
Award Const.	\$ 617,430 <sup>50</sup>	✓	✓	✓	✓	✓
B & B Utilities	\$ 512,218 <sup>25</sup>	✓	✓	✓	✓	✓
Faber Const.	\$ 484,755 <sup>70</sup>	✓	✓	✓	✓	✓
Glazier Environ.	\$ 538,404 <sup>35</sup>	✓	✓	✓	✓	✓

## BID OPENING RESULTS

City of Sultan  
 Storm water Decant Facility  
 January 14, 2020 - 2:00 PM

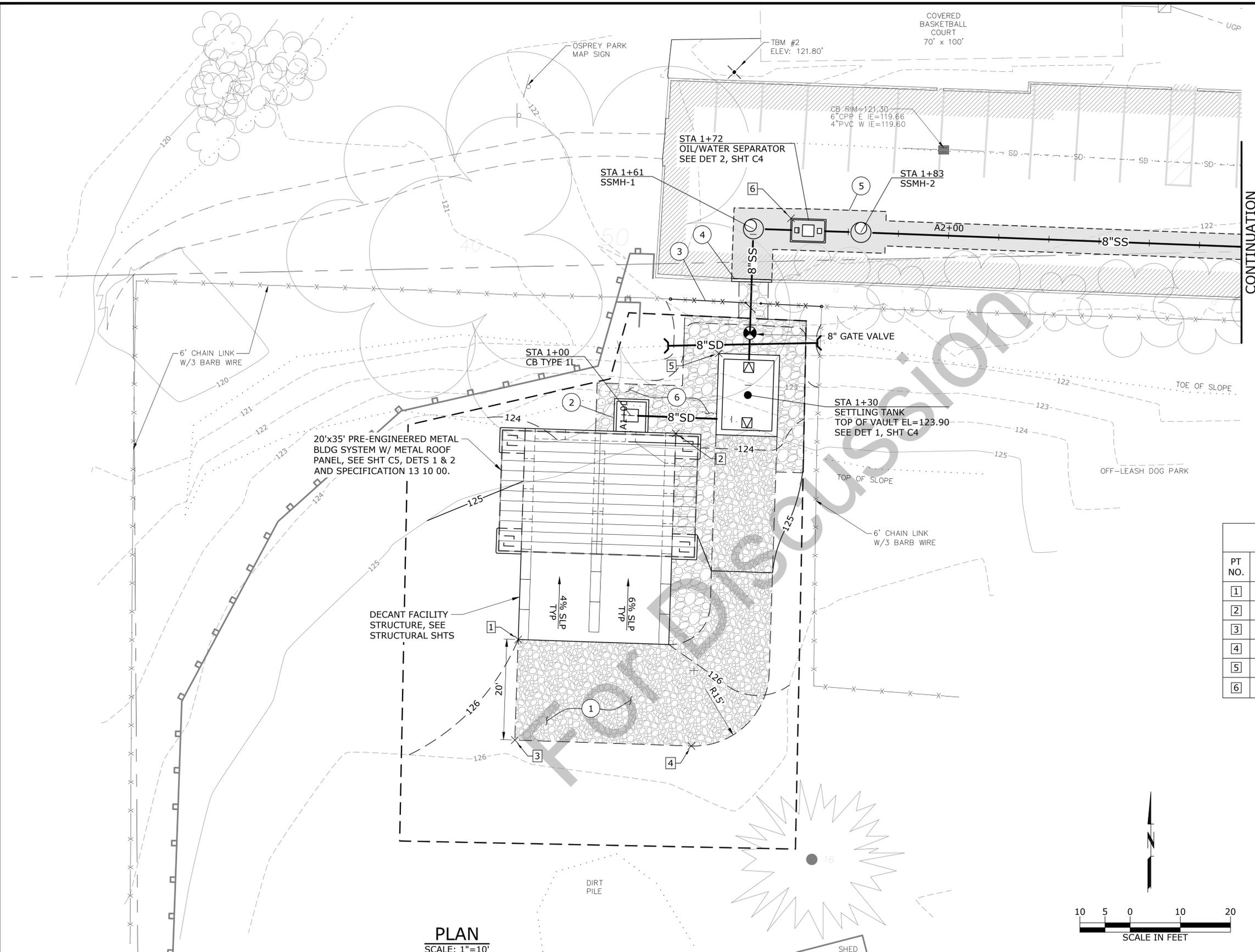
CONTRACTOR	APPARENT BID (Including Tax)	Bond Included	Statement of Qualifications	Acknowledged Addendum	Statement of proposed sub- contractors	Documents Signed
	TOTAL					
Granite Const.	\$502,391 <sup>90</sup>	✓	✓	✓	✓	✓
Interwest Const.	\$533,200 <sup>20</sup>	✓	✓	✓	✓	✓
McClure <del>McClure</del> & Sons	\$475,212 <sup>00</sup>	✓	✓	✓	✓	✓
Neptune Marine	\$542,394 <sup>90</sup>	✓	✓	✓	✓	✓
Pellco Const.	\$483,960 <sup>00</sup>	✓	✓	✓	✓	✓
Ponderosa Pacific	\$464,046 <sup>79</sup>	✓	✓	✓	✓	✓

## BID OPENING RESULTS

City of Sultan  
 Storm water Decant Facility  
 January 14, 2020 - 2:00 PM

CONTRACTOR	APPARENT BID (Including Tax)	Bond Included	Statement of Qualifications	Acknowledged Addendum	Statement of proposed sub- contractors	Documents Signed
	TOTAL					
RRJ Co.	\$ 399,383 <sup>26</sup>	✓	✓	✓	✓	✓
SRV Const.	\$ 498,388 <sup>33</sup>	✓	✓	✓	✓	✓
Stryder Const.	\$ 709,110 <sup>40</sup>	✓	✓	✓	✓	✓
Quilceda Excav.	\$ 443,319 <sup>35</sup>	✓	✓	✓	✓	✓

H:\evt\_projects\19\2420 - Sultan Decant Facility\CAD\Sheets\19-2420-WA-GRADING.dwg C2 12/11/2019 10:09 AM HCM 23.0s (LMS Tech)



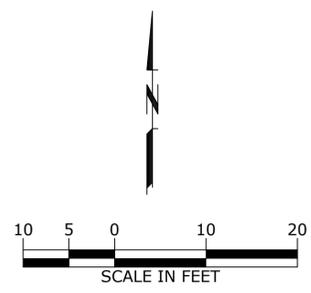
CONTINUATION  
SEE SHEET C3

- CONSTRUCTION KEY NOTES:**
- 1 GRAVEL ACCESS ROAD, SEE DET 1, SHT C6
  - 2 DRAIN DETAIL; SEE DET 1, SHT C5
  - 3 REPLACE FENCE BETWEEN EXIST POSTS; MATCH EXISTING. ADD NEW 26" GATE CENTERED ON GRAVEL PATH.
  - 4 REPLACE CURB, LENGTH AS DISTURBED BY CONSTRUCTION; MATCH EXISTING
  - 5 SAWCUT AND REMOVE PAVEMENT FOR OWS, MANHOLE, AND PIPE INSTALLATION. RESTORE PAVEMENT PER CITY STANDARDS, SEE DET 3, SHT C6, TYP.
  - 6 GRAVEL SURFACING, SEE DET 2, SHT C6

COORDINATE TABLE				
PT NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	SW CORNER FACILITY STEM WALL	N3877.05	E1553.83	126.50
2	NE CORNER FACILITY STEM WALL	N3918.02	E1585.22	126.50
3	SW CORNER GRAVEL	N3857.06	E1553.15	126.17 ±
4	SE CORNER GRAVEL	N3855.88	E1588.32	126.17 ±
5	NW CORNER SETTLING TANK	N3933.91	E1593.75	123.90
6	NW CORNER OIL/WATER SEP	N3960.76	E1608.16	121.80

**NOTES:**  
1. ALL EXCESS MATERIAL MUST BE HAULED OFF SITE TO APPROVED LOCATION.

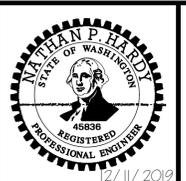
**PLAN**  
SCALE: 1"=10'



NO.	DATE	BY	REVISION

**NOTICE**  
0 1/2 1  
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

CJP  
DESIGNED  
HCM  
DRAWN  
NPH  
CHECKED



**CITY OF SULTAN  
STORMWATER  
DECANT FACILITY**

**SITE AND GRADING PLAN**

PROJECT NO.: 19-2420 SCALE: 1"=10' DATE: DECEMBER 2019

SHEET  
**C2**  
5 of 13

**MUKILTEO CITY COUNCIL AGENDA BILL 2020-87**

<b>SUBJECT TITLE:</b> Decant Facility Construction Contracts Award	<b>Meeting Date:</b> October 5, 2020
<b>Staff Lead:</b> Matt Nienhuis, Public Works Superintendent	<b>Exhibits:</b> 1. Agreement – Interwest Construction, Inc. 2. Supplemental Agreement No. 1 – PACE Engineering, Inc.
<b>Department Director:</b> Andrea Swisstack, P.E., Asst. City Engineer	
<b>Estimated Presentation Time:</b> Consent Agenda	
<b>Previous Review:</b> Infrastructure Committee: 9/13/2017; Council Meeting: 9/18/2017, 7/16/2018	
<b>Budget Reference:</b> 2019 Final Budget, Decant Facility Construction, Page 123: \$1,292,000 2020 Final Budget, Decant Facility Construction, Page 130: \$850,000	

**Budget Information:**

<b>Amount Budgeted:</b>	\$2,142,000	<b>Account Name(s):</b> Decant Facility Construction	<b>Account Number:</b> 440.90.594.310.6203 SW170300.4406203
<b>Amt. Spent to Date:</b>	\$0		
<b>Expenditure Required:</b>	\$2,142,000		
<b>Additional Appropriation Required:</b>	\$0.00		

**RECOMMENDATION:** Council **MOTION** to:

1. Award a contract for Schedule A and Schedule B for the construction of the Decant Facility to the lowest responsible and responsive bidder, Interwest Construction, Inc. of Burlington WA, in the amount of \$1,789,100.00 which includes Washington State Sales Tax.
2. Approve a construction contingency fund in the amount of \$125,900, approximately seven percent (7%).
3. Approve the Supplemental Agreement No. 1 with PACE Engineering, Inc. for construction management, inspection and materials testing services in the amount of \$227,000.

**SUMMARY:**

The Public Works Department procured construction bids according to the City’s Procurement Policies and Procedures. The City followed the Bid Procedures for Public Works Projects over \$30,000, through a competitive sealed bid process as outlined in RCW 35.22.620.

A construction contingency of seven percent (7%) is appropriate for this project as the scope involves mostly above-ground building construction, minimal excavation and is located on a contained and secured site with adequate staging areas and room for construction.

The Consultant, PACE Engineering, Inc., was selected according to the process outlined in the City's Procurement Policies and Procedures for Procurement of Architectural & Engineering Services and RCW 39.80.

This project will construct a new decant facility with additional vehicle storage at the City's Public Works Shop. A decant facility takes the material collected from the City's surface water system and separates the liquid material from the solid material in order to allow Staff to properly dispose of the waste collected. The Decant Facility project is identified in the City's adopted Comprehensive Surface Water Management Plan Update 2015-2021 (SWMP), and the 2015 Comprehensive Plan Capital Facility Project list and is partially funded through a Department of Ecology grant.

**BACKGROUND:**

The City accumulates 500 to 1,000 cubic yards of saturated soil material from NPDES Permit required maintenance of the City's surface water system annually. The material collected from these catch basins, ponds and ditches is saturated and needs to be dewatered in a decant facility in order to separate the solid material from the liquid waste.

The City's existing decant facility is undersized, uncovered, and isolated from an uncovered stockpile area for solids, both of which produce contaminated runoff which enters the onsite stormwater system and ultimately flows into Japanese Gulch Creek.

This project will provide a new decant facility at the Public Works Shop that will be able to accommodate larger loads of material, provide covered areas for the decanted material and will discharge into the sanitary sewer system. In addition, the current design considers the long term operations of the Public Works Stormwater Division and includes heated storage bays for the vector truck, sweeper and other large equipment as these items relate directly to the operation of the surface water system and decant facility.

In November of 2014, Staff submitted an application to the Department of Ecology (Ecology) for grant funding for this project. On July 1, 2015, the City was notified of the award of grant funding. Shortly after the notification of grant award, the grant agreement negotiations were put on hold due to funding limitations set by the State Legislature.

In early 2018, through the approved 2017-2019 State Biennial Budget, Ecology was authorized to resume Agreement negotiations and the final grant agreement was approved by City Council at the July 16, 2018 council meeting.

The final design of the project was approved by the Ecology on July 16, 2020 and the project is ready to move into construction.

**BID OPENING:**

With an engineer's estimate of \$1,751,739.93 the project was advertised on August 25, 2020, September 1, 2020, and September 8, 2020 with bids opened on September 17, 2020. A total of 11 bids were received with Interwest Construction, Inc. being the lowest responsive & responsible bidder, as summarized in the table below:

#	Contractor	Schedule A	Schedule B	Total Bid
	<i>Engineer's Estimate</i>	\$1,495,932.43	\$255,807.50	\$1,751,739.93
<b>1</b>	<b>Interwest Construction, Inc.</b>	<b>\$1,542,022.00</b>	<b>\$247,078.00</b>	<b>\$1,789,100.00</b>
2	RL Alia Company	\$1,857,455.28	\$251,166.50	\$2,108,621.78
3	Faber Construction	\$1,808,609.86	\$315,454.30	\$2,124,064.16
4	McClure and Sons, Inc.	\$1,912,167.14	\$287,023.75	\$2,199,190.89
5	Strider Construction, Inc.	\$2,039,624.47	\$206,082.50	\$2,245,706.97
6	Boss Construction, Inc	\$2,110,969.16	\$345,421.90	\$2,456,391.06
7	Rodarte Construction, Inc	\$2,322,054.74	\$208,845.00	\$2,530,899.74
8	Granite Construction Company	\$2,177,215.98	\$381,225.00	\$2,558,440.98
9	Fisher Construction Group, Inc	\$2,463,822.22	\$159,673.61	\$2,623,495.83
10	C A Carey Corp.	\$2,481,752.65	\$360,782.50	\$2,842,535.15
11	James Company*	\$1,982,649.90	Incomplete	Incomplete

*\*Bidder did not complete all forms therefore bid was incomplete*

**BUDGET:**

The 2019 Final Budget included \$1,292,000 in funding consisting of \$969,000 from the Ecology Grant and \$323,000 City match from the Surface Water fund for construction of the Decant Facility Project. In the 2020 Final Budget an additional \$850,000 of Surface Water Funds were dedicated to the project to cover the increased cost of construction and the vehicle storage component of the project bringing the total construction budget to \$2,142,000. A summary of the budget and proposed expenses are shown below.

<b>BUDGET:</b>		<b>NOTES</b>
2019 - Ecology Grant Funds	\$969,000	Grant Funding
2019 – City Grant Match	\$323,000	Surface Water Fund
2020 – Additional Appropriation	\$850,000	Surface Water Fund
<b>TOTAL BUDGET:</b>	<b>\$2,142,000</b>	
<b>EXPENSES:</b>		
Construction	\$1,789,100	Low bid from Interwest Construction
Const. Mgmt. & Inspect.	\$227,000	
Const. Contingency	\$125,900	Approx. 7% of low bid
<b>TOTAL EXPENSES:</b>	<b>\$2,142,000</b>	

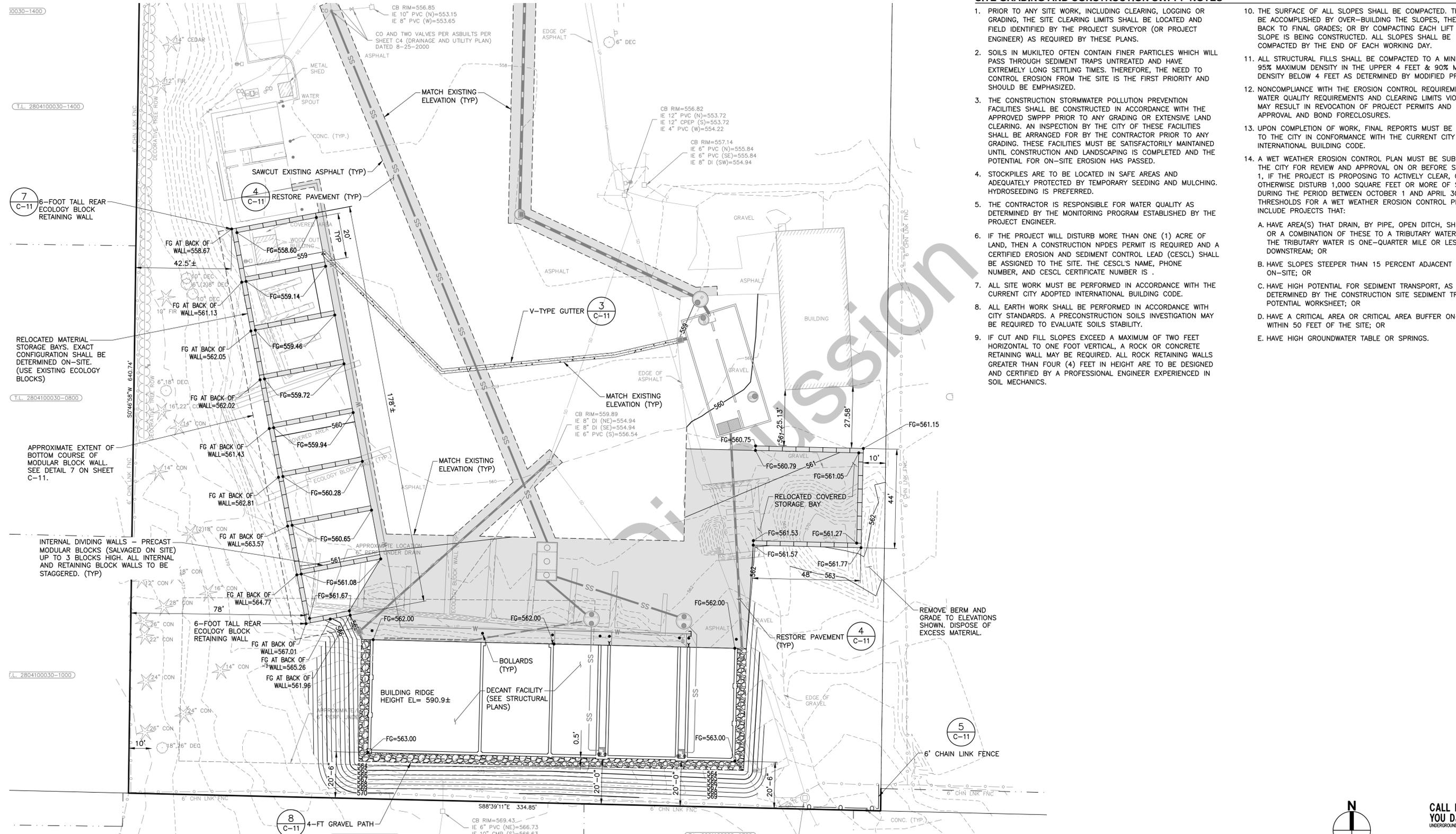
The City's standard construction contingency is ten percent. As mentioned above, the recommended contingency of seven percent is appropriate for this project as the scope of this project involves mostly above-ground building construction, minimal excavation and is located on a contained and secured site with adequate staging areas and room for construction.

Staff recommends awarding both Schedule A and Schedule B to the low bidder, Interwest Construction Inc.

**ALTERNATIVES:**

Do not award and direct staff on next steps.

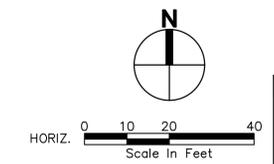
For Discussion



**SITE GRADING AND CONSTRUCTION SWPPP NOTES**

- PRIOR TO ANY SITE WORK, INCLUDING CLEARING, LOGGING OR GRADING, THE SITE CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR (OR PROJECT ENGINEER) AS REQUIRED BY THESE PLANS.
- SOILS IN MUKILTEO OFTEN CONTAIN FINER PARTICLES WHICH WILL PASS THROUGH SEDIMENT TRAPS UNTREATED AND HAVE EXTREMELY LONG SETTLING TIMES. THEREFORE, THE NEED TO CONTROL EROSION FROM THE SITE IS THE FIRST PRIORITY AND SHOULD BE EMPHASIZED.
- THE CONSTRUCTION STORMWATER POLLUTION PREVENTION FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SWPPP PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING. AN INSPECTION BY THE CITY OF THESE FACILITIES SHALL BE ARRANGED FOR BY THE CONTRACTOR PRIOR TO ANY GRADING. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY SEEDING AND MULCHING. HYDROSEEDING IS PREFERRED.
- THE CONTRACTOR IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM ESTABLISHED BY THE PROJECT ENGINEER.
- IF THE PROJECT WILL DISTURB MORE THAN ONE (1) ACRE OF LAND, THEN A CONSTRUCTION NPDES PERMIT IS REQUIRED AND A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) SHALL BE ASSIGNED TO THE SITE. THE CESCL'S NAME, PHONE NUMBER, AND CESCL CERTIFICATE NUMBER IS .
- ALL SITE WORK MUST BE PERFORMED IN ACCORDANCE WITH THE CURRENT CITY ADOPTED INTERNATIONAL BUILDING CODE.
- ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARDS. A PRECONSTRUCTION SOILS INVESTIGATION MAY BE REQUIRED TO EVALUATE SOILS STABILITY.
- IF CUT AND FILL SLOPES EXCEED A MAXIMUM OF TWO FEET HORIZONTAL TO ONE FOOT VERTICAL, A ROCK OR CONCRETE RETAINING WALL MAY BE REQUIRED. ALL ROCK RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT ARE TO BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER EXPERIENCED IN SOIL MECHANICS.
- THE SURFACE OF ALL SLOPES SHALL BE COMPACTED. THIS MAY BE ACCOMPLISHED BY OVER-BUILDING THE SLOPES, THEN CUTTING BACK TO FINAL GRADES; OR BY COMPACTING EACH LIFT AS THE SLOPE IS BEING CONSTRUCTED. ALL SLOPES SHALL BE COMPACTED BY THE END OF EACH WORKING DAY.
- ALL STRUCTURAL FILLS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY IN THE UPPER 4 FEET & 90% MAXIMUM DENSITY BELOW 4 FEET AS DETERMINED BY MODIFIED PROCTOR.
- NONCOMPLIANCE WITH THE EROSION CONTROL REQUIREMENTS, WATER QUALITY REQUIREMENTS AND CLEARING LIMITS VIOLATIONS MAY RESULT IN REVOCATION OF PROJECT PERMITS AND PLAN APPROVAL AND BOND FORECLOSURES.
- UPON COMPLETION OF WORK, FINAL REPORTS MUST BE SUBMITTED TO THE CITY IN CONFORMANCE WITH THE CURRENT CITY ADOPTED INTERNATIONAL BUILDING CODE.
- A WET WEATHER EROSION CONTROL PLAN MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL ON OR BEFORE SEPTEMBER 1, IF THE PROJECT IS PROPOSING TO ACTIVELY CLEAR, GRADE, OR OTHERWISE DISTURB 1,000 SQUARE FEET OR MORE OF SOIL DURING THE PERIOD BETWEEN OCTOBER 1 AND APRIL 30. OTHER THRESHOLDS FOR A WET WEATHER EROSION CONTROL PLAN INCLUDE PROJECTS THAT:
  - HAVE AREA(S) THAT DRAIN, BY PIPE, OPEN DITCH, SHEET FLOW, OR A COMBINATION OF THESE TO A TRIBUTARY WATER, AND THE TRIBUTARY WATER IS ONE-QUARTER MILE OR LESS DOWNSTREAM; OR
  - HAVE SLOPES STEEPER THAN 15 PERCENT ADJACENT OR ON-SITE; OR
  - HAVE HIGH POTENTIAL FOR SEDIMENT TRANSPORT, AS DETERMINED BY THE CONSTRUCTION SITE SEDIMENT TRANSPORT POTENTIAL WORKSHEET; OR
  - HAVE A CRITICAL AREA OR CRITICAL AREA BUFFER ON-SITE, OR WITHIN 50 FEET OF THE SITE; OR
  - HAVE HIGH GROUNDWATER TABLE OR SPRINGS.

FILE NAME: P:\P1717473\CITY OF MUKILTEO STORMWATER DECANT\LOAD\ENGINEERING\SHETS\P1717473\_SITE.DWG  
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**CALL BEFORE YOU DIG 811**  
 UNDERGROUND SERVICE (USA)



**90% SUBMITTAL**

DESIGNED	JMM				
DRAWN	MWP				
CHECKED	JMM				
SYMBOL		REVISION	DATE	BY	APP'D

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**CITY OF MUKILTEO**  
**MUKILTEO CITY HALL**  
 11930 CYRUS WAY  
 MUKILTEO, WA 98275  
 425.263.8000

**VERIFY SCALE**  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DATE: 02/12/2020  
 SCALE: AS SHOWN

**MUKILTEO STORMWATER DECANT FACILITY**  
 GRADING AND SITE PLAN

JOB NUMBER: **17473**  
 DWG NAME: P17473\_SITE  
 SHEET: **C-06** OF 28

# BID TABULATION

## Farr West City Public Works Decant Facility Project

Bid Opening: June 15, 2022, 2:00 pm, Jones & Associates' Office

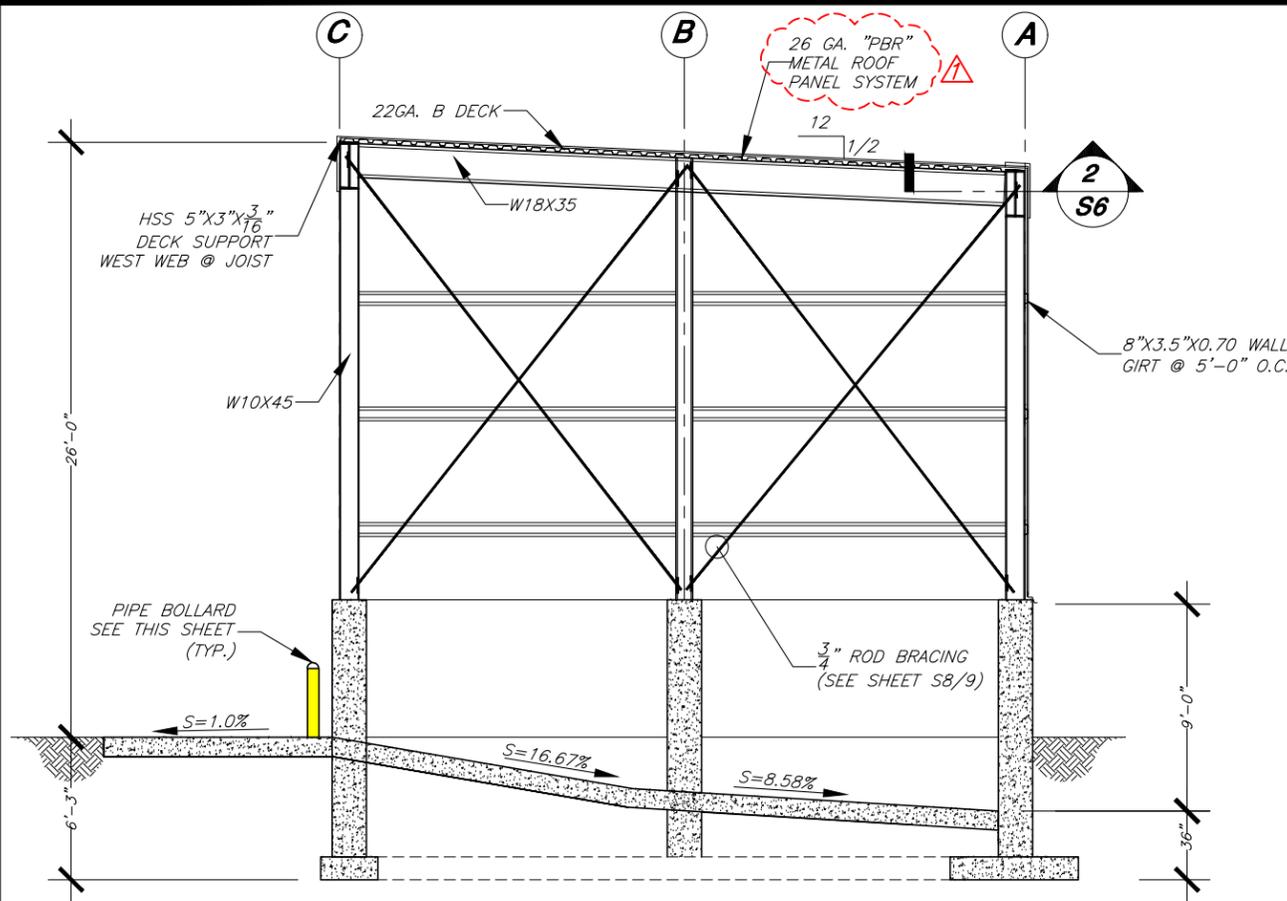
Item	Description	Qty	Unit	ENGINEER'S ESTIMATE		E.K. Bailey Construction, Inc.		Wardell Brothers Construction Inc.		Bowen Construction		VanCon Inc.	
				Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Mobilization	1	LS	\$ 25,000.00	\$ 25,000.00	\$ 4,500.00	\$ 4,500.00	\$ 8,500.00	\$ 8,500.00	\$ 50,000.00	\$ 50,000.00	\$ 63,900.00	\$ 63,900.00
2	Traffic control	1	LS	\$ 7,500.00	\$ 7,500.00	\$ 3,476.00	\$ 3,476.00	\$ 15,000.00	\$ 15,000.00	\$ 6,000.00	\$ 6,000.00	\$ 3,500.00	\$ 3,500.00
3	SWPPP and erosion control	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 8,500.00	\$ 8,500.00	\$ 14,500.00	\$ 14,500.00	\$ 6,000.00	\$ 6,000.00	\$ 8,600.00	\$ 8,600.00
4	Roadway excavation for deceleration lane	400	cy	\$ 15.00	\$ 6,000.00	\$ 26.00	\$ 10,400.00	\$ 51.00	\$ 20,400.00	\$ 42.00	\$ 16,800.00	\$ 67.70	\$ 27,080.00
5	Clear and grub site	10,780	sy	\$ 1.50	\$ 16,170.00	\$ 6.00	\$ 64,680.00	\$ 1.90	\$ 20,482.00	\$ 2.25	\$ 24,255.00	\$ 2.40	\$ 25,872.00
6	Remove existing fencing and mow strip	175	lf	\$ 10.00	\$ 1,750.00	\$ 12.00	\$ 2,100.00	\$ 4.50	\$ 787.50	\$ 15.00	\$ 2,625.00	\$ 25.00	\$ 4,375.00
7	Remove existing 12" storm drain	400	lf	\$ 10.00	\$ 4,000.00	\$ 24.00	\$ 9,600.00	\$ 29.00	\$ 11,600.00	\$ 13.00	\$ 5,200.00	\$ 30.00	\$ 12,000.00
8	Remove existing irrigation turnout box	1	ea	\$ 500.00	\$ 500.00	\$ 2,250.00	\$ 2,250.00	\$ 940.00	\$ 940.00	\$ 1,000.00	\$ 1,000.00	\$ 500.00	\$ 500.00
9	Remove existing CMP manhole	1	ea	\$ 250.00	\$ 250.00	\$ 1,850.00	\$ 1,850.00	\$ 1,050.00	\$ 1,050.00	\$ 1,400.00	\$ 1,400.00	\$ 1,500.00	\$ 1,500.00
10	Saw-cut asphalt	384	lf	\$ 3.50	\$ 1,344.00	\$ 7.00	\$ 2,688.00	\$ 2.00	\$ 768.00	\$ 7.00	\$ 2,688.00	\$ 4.00	\$ 1,536.00
11	Granular Borrow	500	ton	\$ 22.00	\$ 11,000.00	\$ 23.85	\$ 11,925.00	\$ 42.00	\$ 21,000.00	\$ 34.00	\$ 17,000.00	\$ 48.00	\$ 24,000.00
12	Untreated base course	1,180	ton	\$ 28.00	\$ 33,040.00	\$ 26.75	\$ 31,565.00	\$ 48.00	\$ 56,640.00	\$ 33.00	\$ 38,940.00	\$ 40.00	\$ 47,200.00
13	Hot mix asphalt (1/2"), PG 64-34	310	ton	\$ 100.00	\$ 31,000.00	\$ 110.00	\$ 34,100.00	\$ 175.00	\$ 54,250.00	\$ 154.00	\$ 47,740.00	\$ 150.00	\$ 46,500.00
14	Hot mix asphalt (1/2"), PG 58-28	455	ton	\$ 85.00	\$ 38,675.00	\$ 89.00	\$ 40,495.00	\$ 105.00	\$ 47,775.00	\$ 118.00	\$ 53,690.00	\$ 125.00	\$ 56,875.00
15	Chip seal , type II w/ LMRCs-2 emulsion	600	sy	\$ 8.00	\$ 4,800.00	\$ 22.00	\$ 13,200.00	\$ 37.00	\$ 22,200.00	\$ 30.00	\$ 18,000.00	\$ 26.00	\$ 15,600.00
16	Concrete flatwork (8" thick)	1,440	sf	\$ 10.00	\$ 14,400.00	\$ 16.00	\$ 23,040.00	\$ 23.00	\$ 33,120.00	\$ 15.25	\$ 21,960.00	\$ 18.00	\$ 25,920.00
17	8" PVC sewer line	350	lf	\$ 50.00	\$ 17,500.00	\$ 42.00	\$ 14,700.00	\$ 63.00	\$ 22,050.00	\$ 52.00	\$ 18,200.00	\$ 230.00	\$ 80,500.00
18	4' dia. sewer manhole	2	ea	\$ 4,000.00	\$ 8,000.00	\$ 5,450.00	\$ 10,900.00	\$ 5,000.00	\$ 10,000.00	\$ 6,575.00	\$ 13,150.00	\$ 9,000.00	\$ 18,000.00
19	Connection to existing sewer manhole	1	ea	\$ 2,000.00	\$ 2,000.00	\$ 1,560.00	\$ 1,560.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 10,000.00	\$ 10,000.00
20	5'x5' cleanout box w/ connection to decant bay	1	ea	\$ 6,000.00	\$ 6,000.00	\$ 7,946.00	\$ 7,946.00	\$ 7,400.00	\$ 7,400.00	\$ 8,900.00	\$ 8,900.00	\$ 5,500.00	\$ 5,500.00
21	Oil/water separator	1	LS	\$ 20,000.00	\$ 20,000.00	\$ 9,900.00	\$ 9,900.00	\$ 16,200.00	\$ 16,200.00	\$ 16,500.00	\$ 16,500.00	\$ 8,000.00	\$ 8,000.00
22	2" poly water service	350	lf	\$ 25.00	\$ 8,750.00	\$ 32.00	\$ 11,200.00	\$ 28.00	\$ 9,800.00	\$ 51.00	\$ 17,850.00	\$ 45.00	\$ 15,750.00
23	1" poly water service	278	lf	\$ 20.00	\$ 5,560.00	\$ 30.00	\$ 8,340.00	\$ 18.00	\$ 5,004.00	\$ 41.00	\$ 11,398.00	\$ 40.00	\$ 11,120.00
24	2" yard hydrant	1	ea	\$ 2,500.00	\$ 2,500.00	\$ 1,740.00	\$ 1,740.00	\$ 650.00	\$ 650.00	\$ 1,850.00	\$ 1,850.00	\$ 1,200.00	\$ 1,200.00
25	3" PVC power conduit	460	lf	\$ 20.00	\$ 9,200.00	\$ 15.00	\$ 6,900.00	\$ 36.00	\$ 16,560.00	\$ 37.00	\$ 17,020.00	\$ 27.00	\$ 12,420.00
26	15" RCP storm drain	35	lf	\$ 100.00	\$ 3,500.00	\$ 88.00	\$ 3,080.00	\$ 160.00	\$ 5,600.00	\$ 153.00	\$ 5,355.00	\$ 400.00	\$ 14,000.00
27	6" perforated ADS drain pipe	147	lf	\$ 35.00	\$ 5,145.00	\$ 30.00	\$ 4,410.00	\$ 60.00	\$ 8,820.00	\$ 45.75	\$ 6,725.25	\$ 100.00	\$ 14,700.00
28	4' dia. Storm drain manhole	1	ea	\$ 4,000.00	\$ 4,000.00	\$ 4,680.00	\$ 4,680.00	\$ 3,850.00	\$ 3,850.00	\$ 5,025.00	\$ 5,025.00	\$ 6,400.00	\$ 6,400.00
29	Plug existing drain pipe	1	ea	\$ 1,000.00	\$ 1,000.00	\$ 1,350.00	\$ 1,350.00	\$ 850.00	\$ 850.00	\$ 925.00	\$ 925.00	\$ 2,000.00	\$ 2,000.00
30	2'x2' drain box	1	ea	\$ 2,000.00	\$ 2,000.00	\$ 3,150.00	\$ 3,150.00	\$ 2,950.00	\$ 2,950.00	\$ 2,700.00	\$ 2,700.00	\$ 5,000.00	\$ 5,000.00
31	15" RCP flared end section	1	ea	\$ 1,000.00	\$ 1,000.00	\$ 1,400.00	\$ 1,400.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 1,400.00	\$ 1,400.00
32	Storm drain outlet control structure	1	ea	\$ 10,000.00	\$ 10,000.00	\$ 6,787.00	\$ 6,787.00	\$ 9,600.00	\$ 9,600.00	\$ 8,750.00	\$ 8,750.00	\$ 5,000.00	\$ 5,000.00

Item	Description	Qty	Unit	ENGINEER'S ESTIMATE		E.K. Bailey Construction, Inc.		Wardell Brothers Construction Inc.		Bowen Construction		VanCon Inc.	
				Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
33	Rough-grade of detention basin	1	LS	\$ 10,000.00	\$ 10,000.00	\$ 9,640.00	\$ 9,640.00	\$ 8,500.00	\$ 8,500.00	\$ 10,400.00	\$ 10,400.00	\$ 14,400.00	\$ 14,400.00
34	Small reinforced concrete retaining wall	180	sf	\$ 50.00	\$ 9,000.00	\$ 22.00	\$ 3,960.00	\$ 30.00	\$ 5,400.00	\$ 38.50	\$ 6,930.00	\$ 90.00	\$ 16,200.00
35	6' chain link fencing w/ concrete mow strip	165	lf	\$ 30.00	\$ 4,950.00	\$ 35.00	\$ 5,775.00	\$ 70.00	\$ 11,550.00	\$ 66.75	\$ 11,013.75	\$ 109.00	\$ 17,985.00
36	6' chain link fencing on retaining wall	34	lf	\$ 25.00	\$ 850.00	\$ 75.65	\$ 2,572.10	\$ 90.00	\$ 3,060.00	\$ 53.00	\$ 1,802.00	\$ 48.00	\$ 1,632.00
37	Temporary 6' chain link fencing	260	lf	\$ 20.00	\$ 5,200.00	\$ 18.55	\$ 4,823.00	\$ 10.00	\$ 2,600.00	\$ 12.00	\$ 3,120.00	\$ 11.00	\$ 2,860.00
38	20" chain link gate	1	ea	\$ 1,500.00	\$ 1,500.00	\$ 1,704.00	\$ 1,704.00	\$ 2,500.00	\$ 2,500.00	\$ 3,000.00	\$ 3,000.00	\$ 3,200.00	\$ 3,200.00
39	Raise manhole to grade with concrete collar	1	ea	\$ 1,500.00	\$ 1,500.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	\$ 1,100.00	\$ 1,100.00	\$ 1,000.00	\$ 1,000.00
40	Decant and storage structure complete	1	LS	\$ 480,000.00	\$ 480,000.00	\$ 689,533.00	\$ 689,533.00	\$ 650,000.00	\$ 650,000.00	\$ 738,700.00	\$ 738,700.00	\$ 632,000.00	\$ 632,000.00
<b>TOTAL (Items 1-40)</b>				<b>\$</b>	<b>819,584.00</b>	<b>\$</b>	<b>1,081,619.10</b>	<b>\$</b>	<b>1,136,356.50</b>	<b>\$</b>	<b>1,226,912.00</b>	<b>\$</b>	<b>1,265,225.00</b>

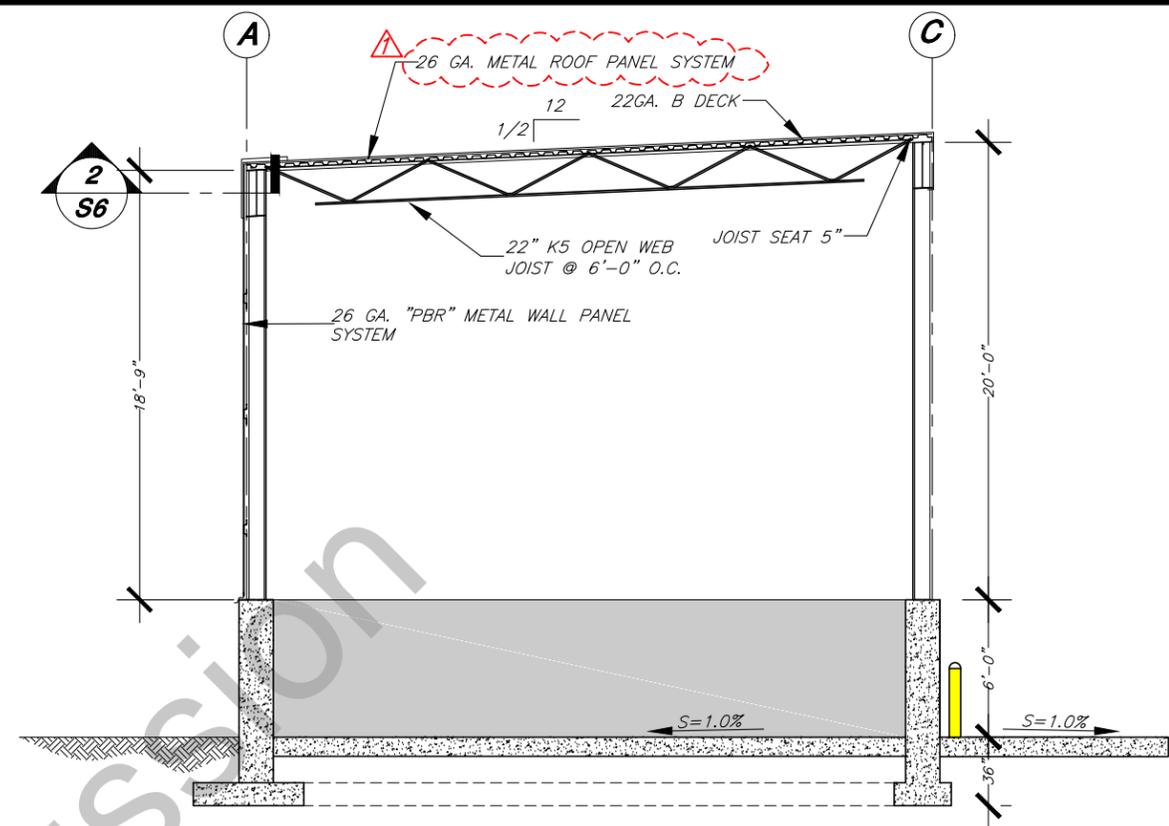
Project Engineer *Matthew L. Belmont*

Date June 15, 2022

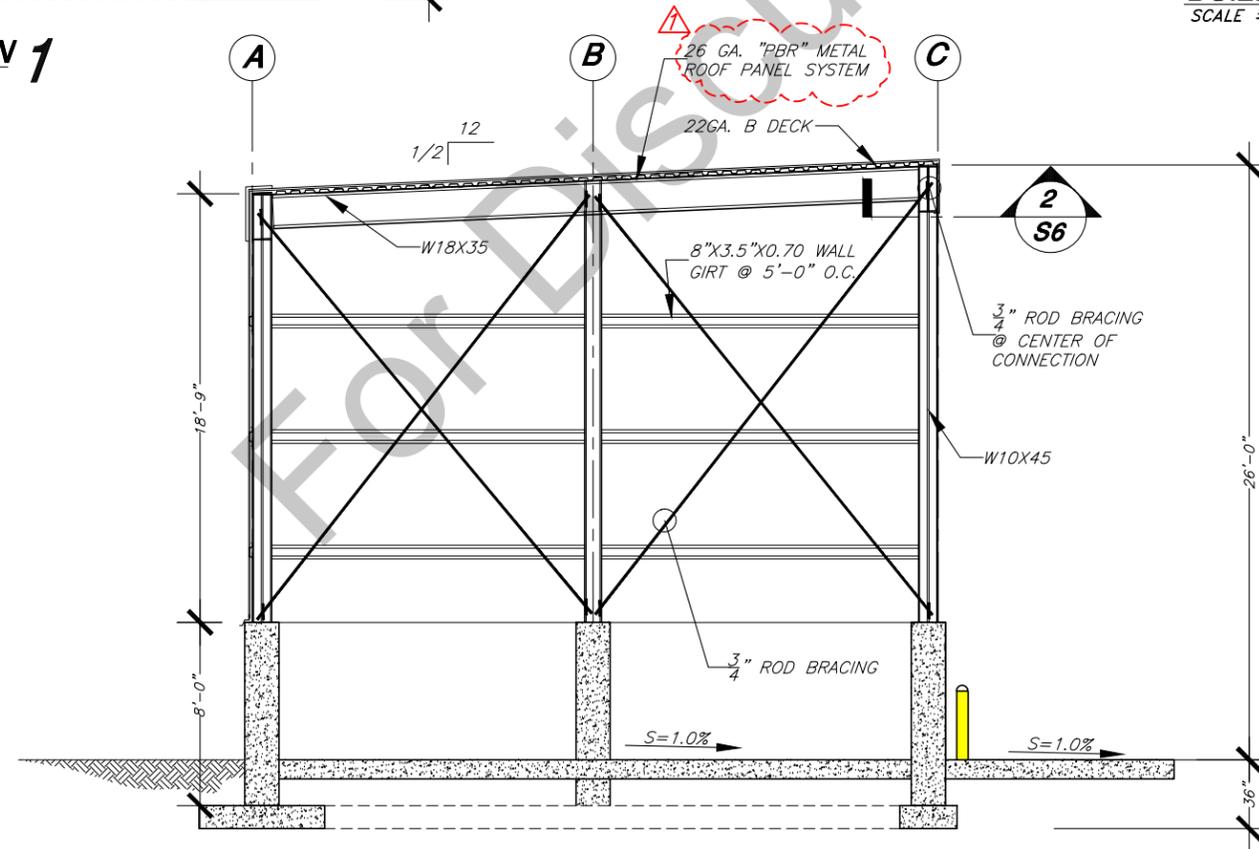
For Discussion



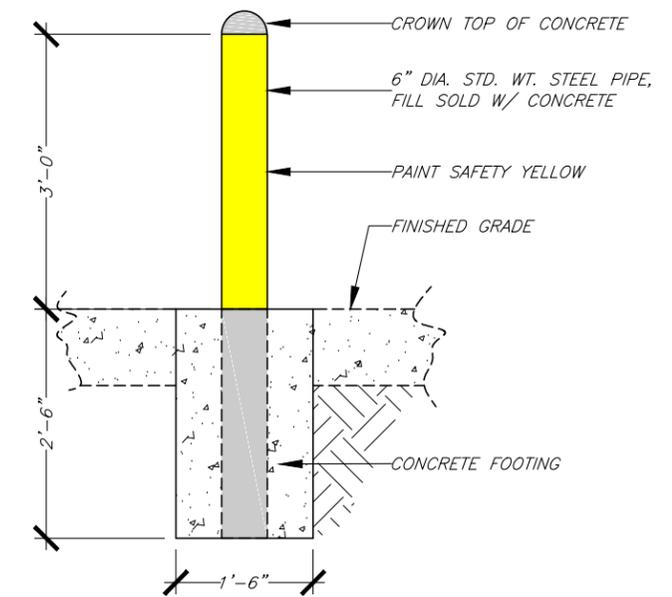
**BUILDING SECTION 1**  
SCALE = 3/32" = 1'



**BUILDING SECTION 2**  
SCALE = 3/32" = 1'



**BUILDING SECTION 3**  
SCALE = 3/32" = 1'

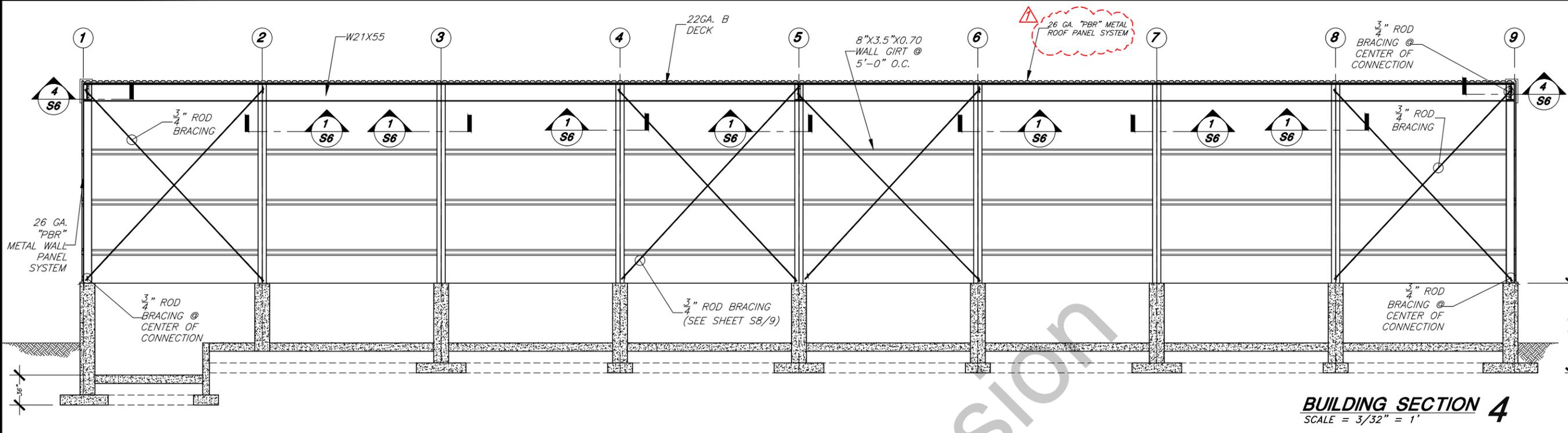


**PIPE BOLLARD DETAIL 4**  
SCALE = 1" = 1'

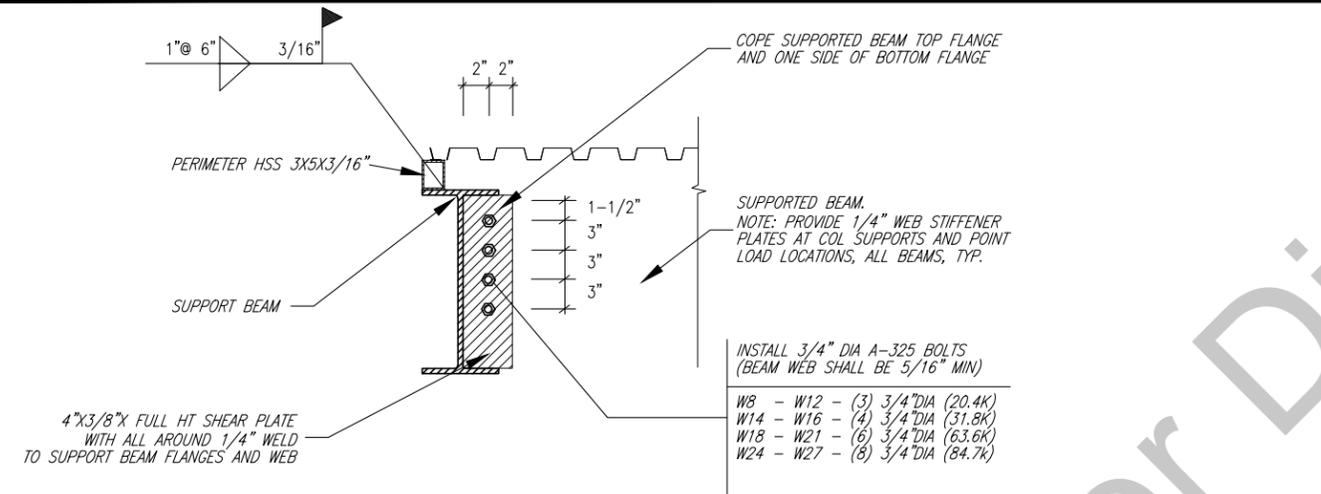
**NOTE:**  
PRE-ENGINEERED BUILDING APPROVED OR EQUAL TO THE DIMENSIONS AND DESIGN REQUIREMENTS SHOWN ON THE PLANS.

DATE	REVISION
2022-06-09	METAL ROOF AND WALL PANEL

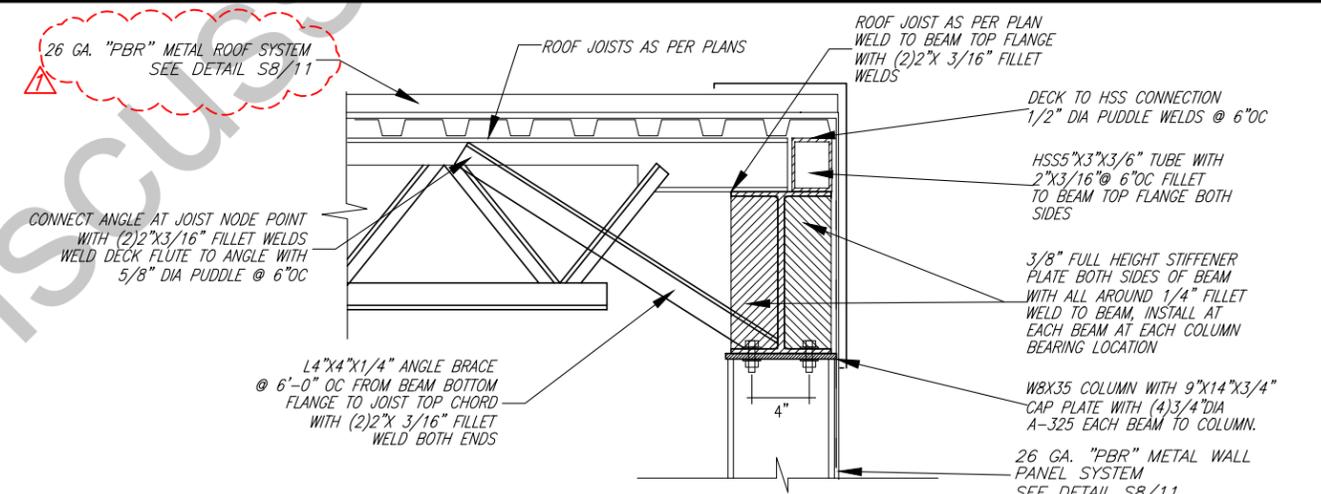
SLS DESIGNED	SLS DRAWN	SLS CHECKED
24.X.36	1/8"=1'	11.X.17
		1/8"=1'



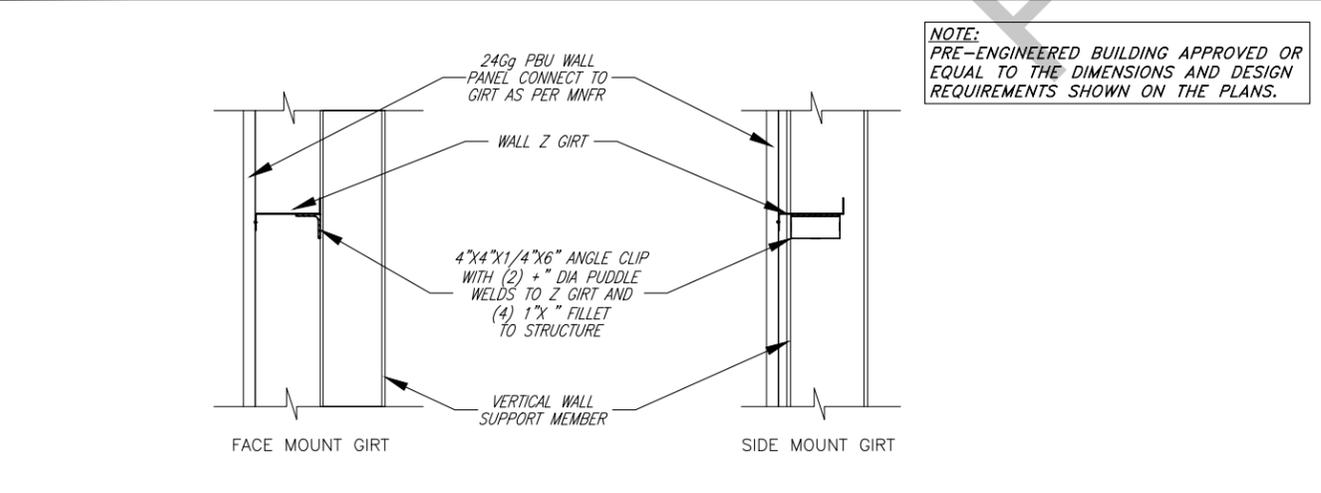
**BUILDING SECTION 4**  
SCALE = 3/32" = 1'



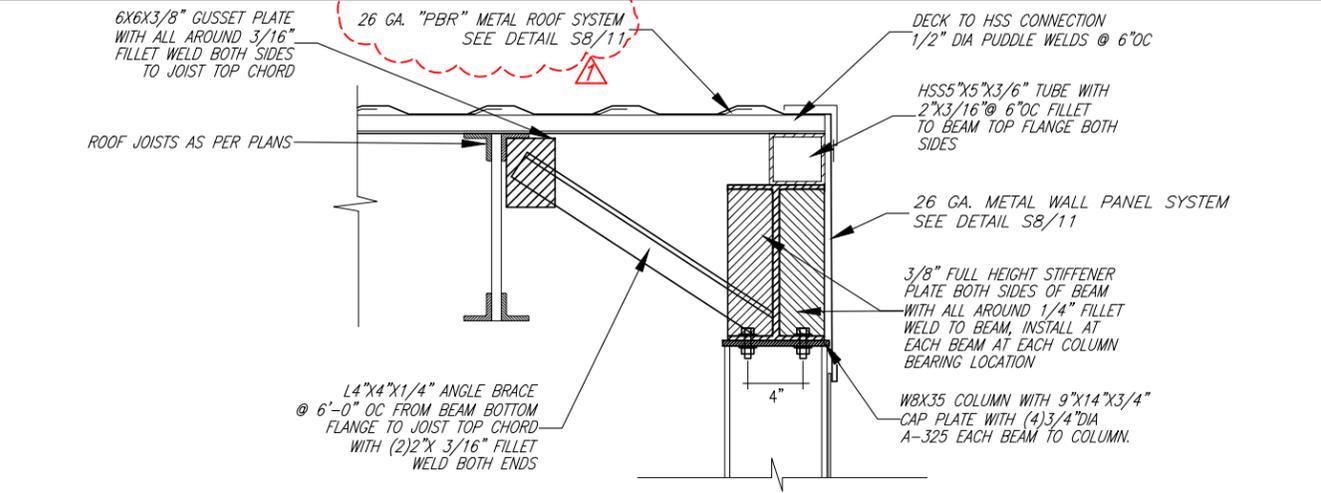
**WF BEAM TO WF BEAM CONNECTION STRUCTURAL SECTION 1**  
SCALE = NONE



**JOIST / BEAM / COLUMN CONNECTION SECTION - BEARING WALL LINE 2**  
SCALE = NONE



**GIRT CONNECTION TO VERTICAL SUPPORT ELEMENT 3**  
SCALE = NONE



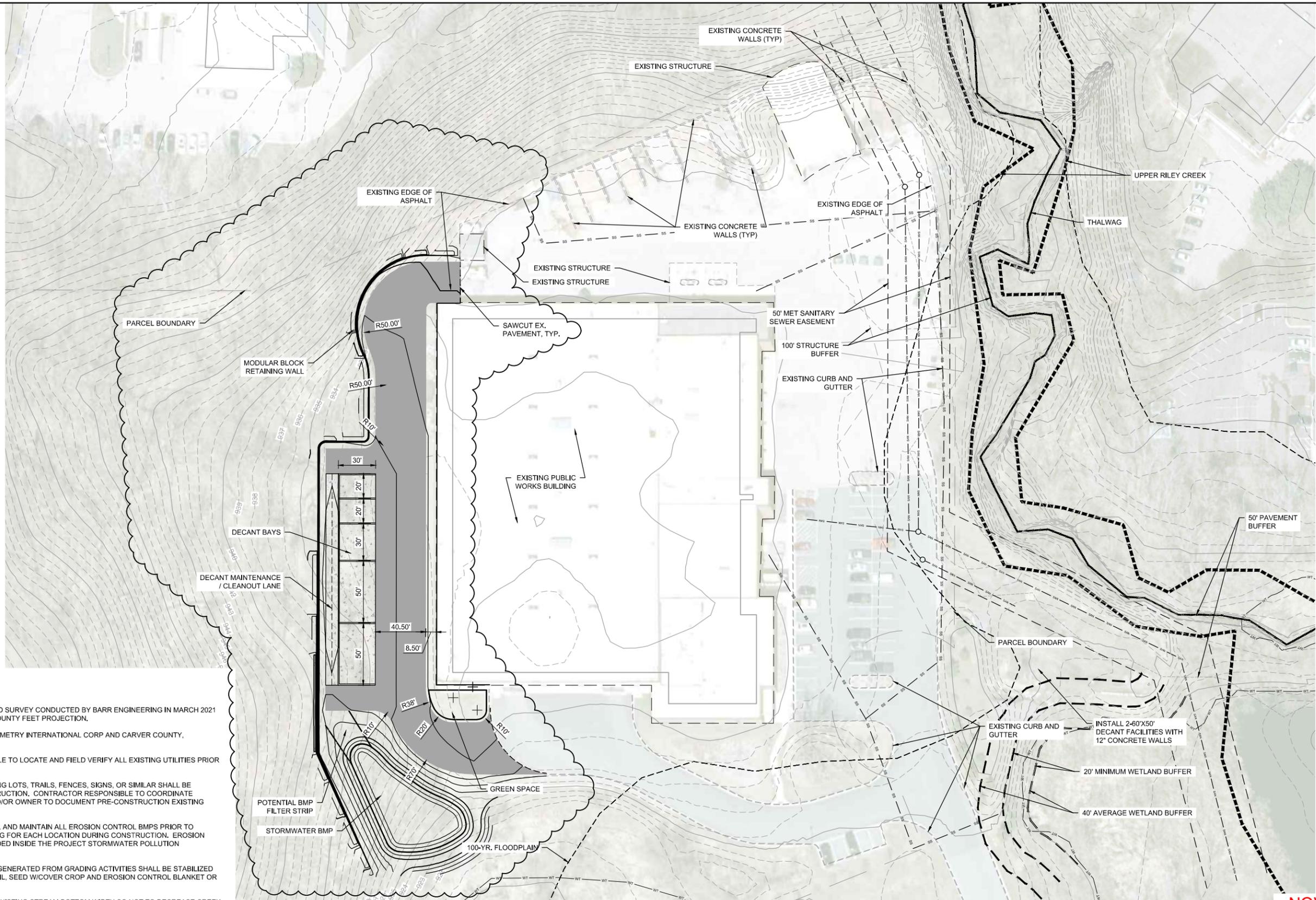
**JOIST / BEAM / COLUMN CONNECTION SECTION - SIDE WALL LINE 4**  
SCALE = NONE

DATE	REVISION
2022-06-09	METAL ROOF AND WALL PANEL

SCALE:	DESIGNED	DRAWN	CHECKED
24"x36" 3/16"=1'	SLS	SLS	SLS
11"x17" 3/32"=1'			
SHEET:	S6		
	OF 1 SHEETS		

Attachment 2: November 2022 Concept Layout

CADD USER: DEREK J. SEIFERT FILE: W:\DESIGN\23270053\_1\UPPER RILEY CREEK\DECANT FACILITY\CONCEPT\BONE\YARD REVISED\_DWG.DWG PLOT SCALE: 1:2 PLOT DATE: 11/11/2022 9:34 PM



**GENERAL NOTES:**

1. TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH 2021 AND JULY 2022 IN CARVER COUNTY FEET PROJECTION.
2. IMAGERY: COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND CARVER COUNTY, MINNESOTA, 2021.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPS PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
6. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET OR STRAW MULCH.
7. CONTRACTOR TO MAINTAIN EXISTING STREAM BOTTOM WIDTH SO NOT TO DECREASE CREEK CROSS SECTIONAL AREA DURING RIPRAP INSTALLATION.
8. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND/OR ENGINEER AND STAKED IN THE FIELD.
9. TEST AND MANAGE DISTURBED SOILS ON SITE AS DESCRIBED IN THE RESPONSE ACTION PLAN.

1 PLAN: SITE LAYOUT 0 40 80 SCALE IN FEET

**NOVEMBER 2022  
CONCEPT LAYOUT  
FOR DISCUSSION  
NOT FOR CONSTRUCTION**

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	DJP	JCO	SAS	08/31/2022	CONCEPT

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_ LICENSE # \_\_\_\_\_

CLIENT	08/31/22						
BID							
CONSTRUCTION RECORD							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

**BARR** Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
Suite 200  
MINNEAPOLIS, MN 55435

Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: (952) 832-2601  
Ph: 1-800-632-2277  
www.barr.com

Scale	AS SHOWN
Date	11/11/22
Drawn	
Checked	
Designed	
Approved	

**RILEY PURGATORY BLUFF CREEK WD**  
CHANHASSEN, MN.

**UPPER RILEY CREEK  
PUBLIC WORKS DECANT FACILITY**  
SITE LAYOUT

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	
DWG. No.	C-01
REV. No.	A