

**School District of River Falls
Special Board Meeting**

July 6, 2026 - 5:30 PM

District Office

852 E Division Street

River Falls, Wisconsin 54022

Personnel Committee members: Stacy Johnson Myers (Chair) and Lindsey Curtis

A quorum of the School Board may be present for information-gathering purposes only.

Agendas can be viewed at <https://www.rfsd.k12.wi.us/district/school-board.cfm> or at
<https://meetings.boardbook.org/Public/Organization/1447>

1. **CALL TO ORDER - 5:30 PM**

2. **MANNER OF PUBLIC NOTIFICATION OF MEETING**

3. **PLEDGE OF ALLEGIANCE**

4. **HEARING OF VISITORS OR DELEGATIONS**

5. **PEDESTRIAN SAFETY IMPROVEMENTS AND ADDITIONAL PARKING LOT BIDS**

2

Description: The Director of Finance and Facilities will recommend approval of bids for the pedestrian safety improvements and additional parking lot at the River Falls High School.

Recommended Action: Approve a bid for the pedestrian safety improvements and additional parking lot at River Falls High School.

6. **ADJOURN**

Bray Associates Architects, Inc.
Davenport, Milwaukee, Sheboygan, St. Paul



Thursday, June 25, 2026

PEDESTRIAN SAFETY IMPROVEMENTS AND ADDITIONAL PARKING LOT
RIVER FALLS HIGH SCHOOL

BID TABULATION

Contractor	Total Excavating & Grading	Monary Paving Company	Park Construction	Minnesota Roadways	Bituminous Roadways	Aslakson's Services	George Siegfried Construction
Acknowledgement of Required Site Visits	Yes	No Bid Received	No Bid Received	No Bid Received	No Bid Received	No Bid Received	No Bid Received
River Falls High School							
New Lot Adjacent to Tennis & Expanded Lot at Softball	\$ 625,739.90	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting at New Parking Lot Adjacent to Tennis Courts	\$ 51,422.25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pedestrian Pathway Const. & Removal at Front of School	\$ 178,537.50	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Payment and Performance Bond	\$ 15,100.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ 870,799.65	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Detail on Asphalt Mix and Base Course Provided	Yes	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
List of Subcontractors/Suppliers Provided	Yes	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Contract - Any Proposed Revisions?	No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Bad Soils Contingency - 20.0%	\$ 174,200.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Contingency (Irrigation Revisions, Signage, etc.) - 7.5%	\$ 65,300.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recommended Contingencies:	\$ 239,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total - Bid Total + Recommended Contingencies	\$ 1,110,299.65	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



SCHOOL DISTRICT OF
River Falls

Pedestrian Safety Improvements and Additional Parking Lot

River Falls High School

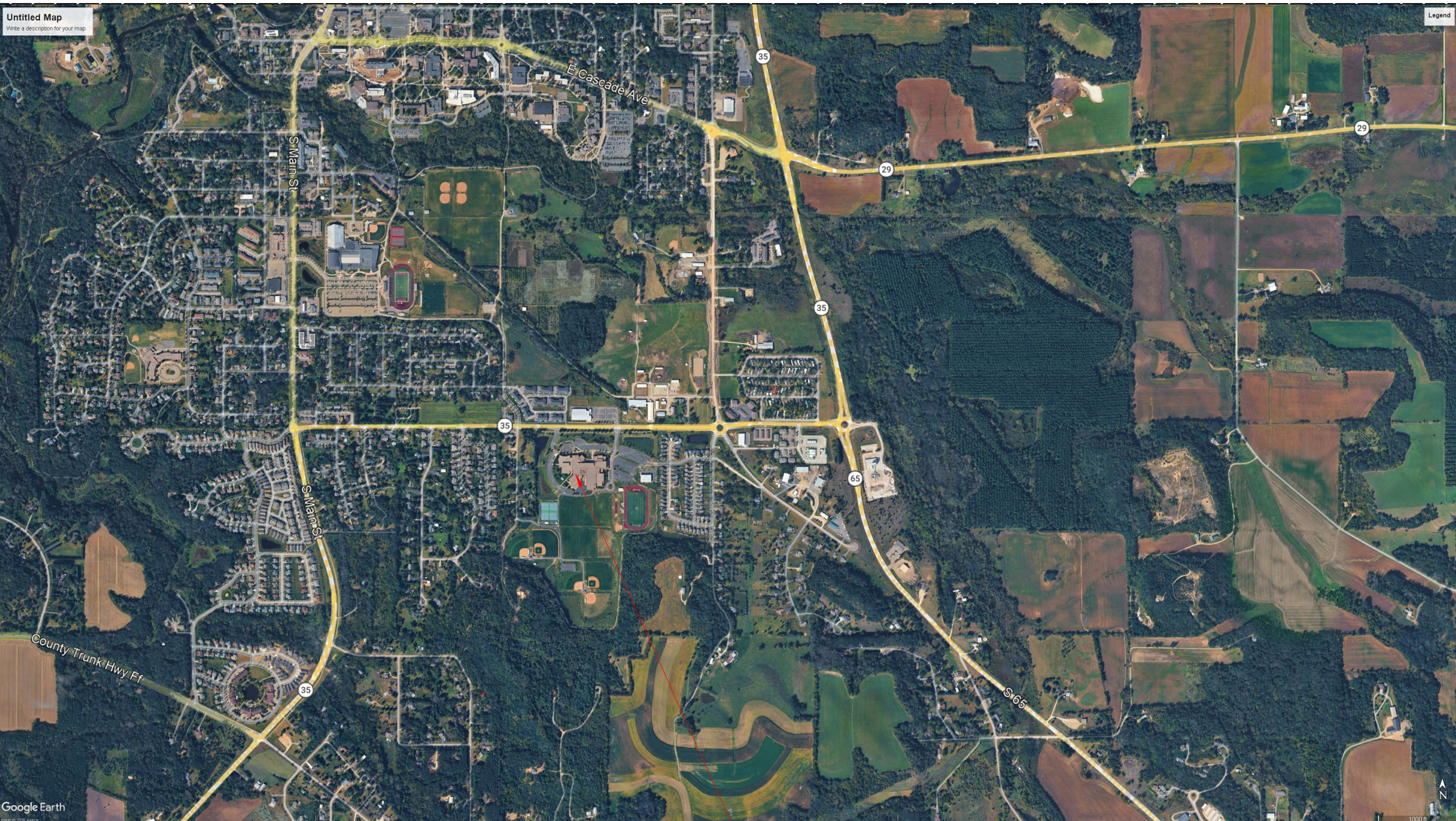
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

CONSTRUCTION DOCUMENTS

June 3, 2026



PROJECT LOCATION



PROJECT LOCATION

Civil

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, Minnesota 55110-5126
(651) 481-9120

Electrical

MSA Professional Services, Inc.
116 Fremont Street, PO Box 235
Kiel, Wisconsin 53042
(920) 894-7800

DRAWING INDEX	
GENERAL INFORMATION	
G0.0	COVER SHEET
CIVIL	
C1.1	DEMOLITION PLAN NORTH
C1.2	DEMOLITION PLAN CENTRAL
C1.3	DEMOLITION PLAN SOUTH
C2.1	SITE PLAN NORTH
C2.2	SITE PLAN CENTRAL
C2.3	SITE PLAN SOUTH
C3.1	GRADING & EROSION CONTROL PLAN NORTH
C3.2	GRADING & EROSION CONTROL PLAN CENTRAL
C3.3	GRADING & EROSION CONTROL PLAN SOUTH
C4.1	UTILITY PLAN NORTH
C4.2	UTILITY PLAN CENTRAL
C5.1	DETAILS
C5.2	DETAILS
C5.3	DETAILS
ELECTRICAL	
EP1.0	OVERALL SITE PLAN - NEW PARKING LOT - ELECTRICAL
EP1.1	DRAWING SPECIFICATIONS



Milwaukee
829 South 1st Street
Milwaukee, Wisconsin 53204
T: 414.226.0200
Sheboygan • Davenport • Saint Paul
www.brayarch.com

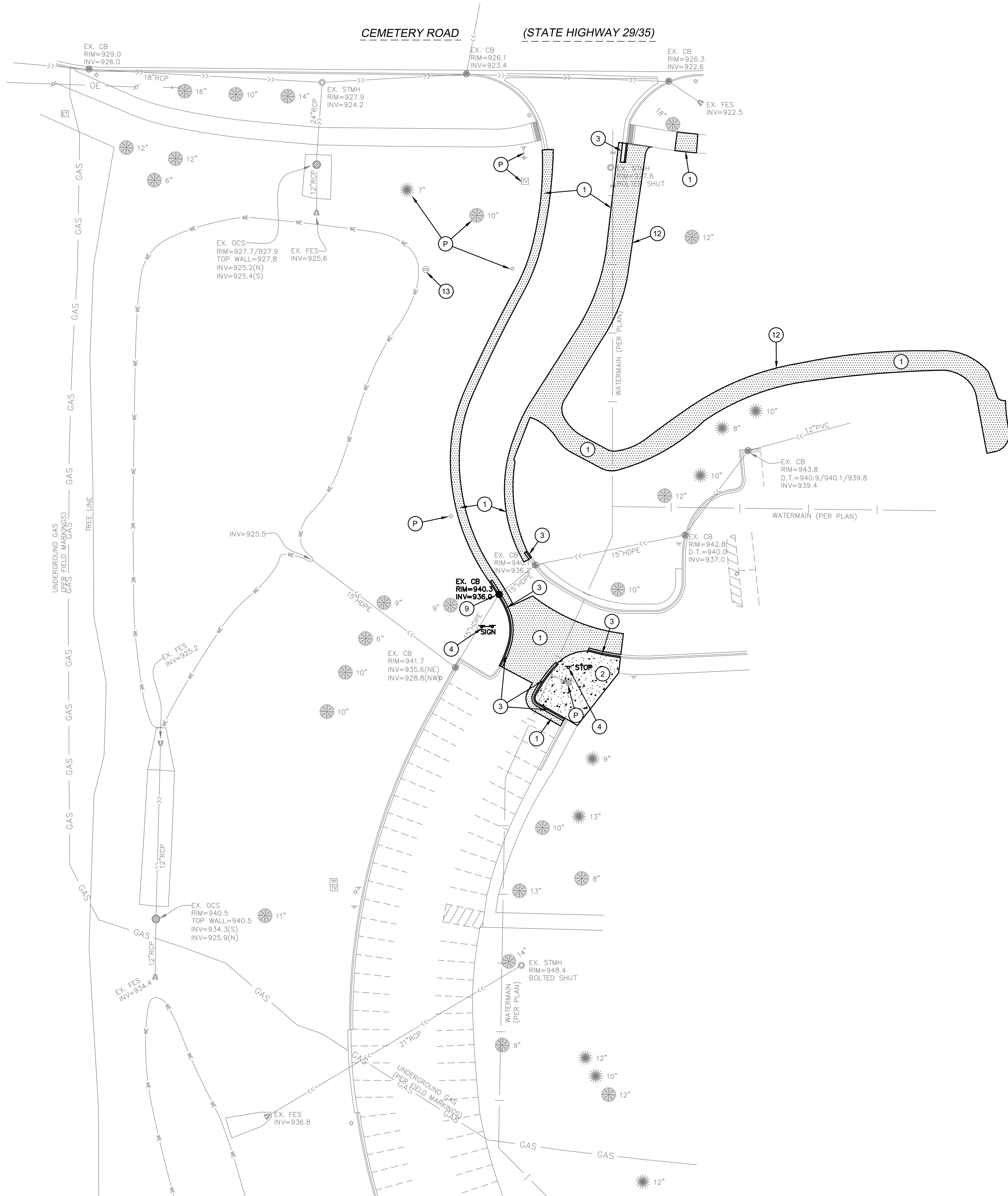
Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:	
DATE	DESCRIPTION

Project Number:
3792

Sheet Title:
COVER SHEET

Sheet Number:
G0.0



SYMBOL LEGEND

- REMOVE AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT SECTION
- REMOVE AND DISPOSE OF EXISTING CONCRETE PAVEMENT SECTION

KEY NOTES

- REMOVE AND DISPOSE OF BITUMINOUS PAVEMENT.
- REMOVE AND DISPOSE OF CONCRETE PAVEMENT.
- REMOVE AND DISPOSE OF CONCRETE CURB AND GUTTER.
- SALVAGE SIGN FOR REINSTALLATION. REMOVE AND DISPOSE OF POST AND ANY ASSOCIATED FOOTING.
- REMOVE AND DISPOSE OF LIGHT POLE, AND FOOTING. COORDINATE DISCONNECTION WITH ELECTRICAL.
- REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE, POSTS, AND FOOTINGS.
- REMOVE AND DISPOSE OF STORM SEWER.
- REMOVE TREE, STUMP, AND ROOTS.
- REMOVE AND SALVAGE CASTING FOR REINSTALLATION.
- REMOVE PAVEMENT STRIPING.
- CONTRACTOR TO REMOVE EXISTING IRRIGATION UNDER NEW PARKING LOTS. COORDINATE REMOVALS WITH OWNER TO MAINTAIN SYSTEM FUNCTIONALITY. SEE EXISTING IRRIGATION PLAN ON SHEET C1.2.
- TRAIL NOT TO BE REMOVED UNTIL THE PROJECT CREATING THE NEW TRAIL FROM CEMETERY ROAD TO THE HIGH SCHOOL IS COMPLETE.
- ADJUST/EXTEND CLEANOUT AS NEEDED, SEE UTILITY PLAN NORTH.
- PROTECT.

DEMOLITION NOTES

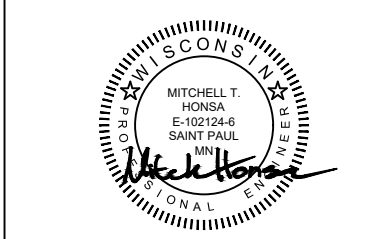
- Contractor shall field verify all existing utility locations and site conditions throughout the project extents.
- It is the responsibility of the Contractor to perform or coordinate all necessary utility demolitions and relocations from existing utility locations to all onsite amenities and buildings to complete the work. These connections may include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
- Prior to beginning work, contact Diggers Hotline 811 or (800-242-8511) to locate utilities throughout the area under construction. The Contractor shall retain the services of a private utility locator to locate the private utilities.
- Sawcut along the edges of pavements, sidewalks, and curbs to remain. Unless otherwise indicated, concrete removals shall extend to the nearest existing joint.
- All construction shall be performed in accordance with state and local standard specifications for construction.

Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:	
DATE	DESCRIPTION

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengr.com

©2025 Larson Engineering, Inc. All rights reserved.
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 **WISCONSIN**

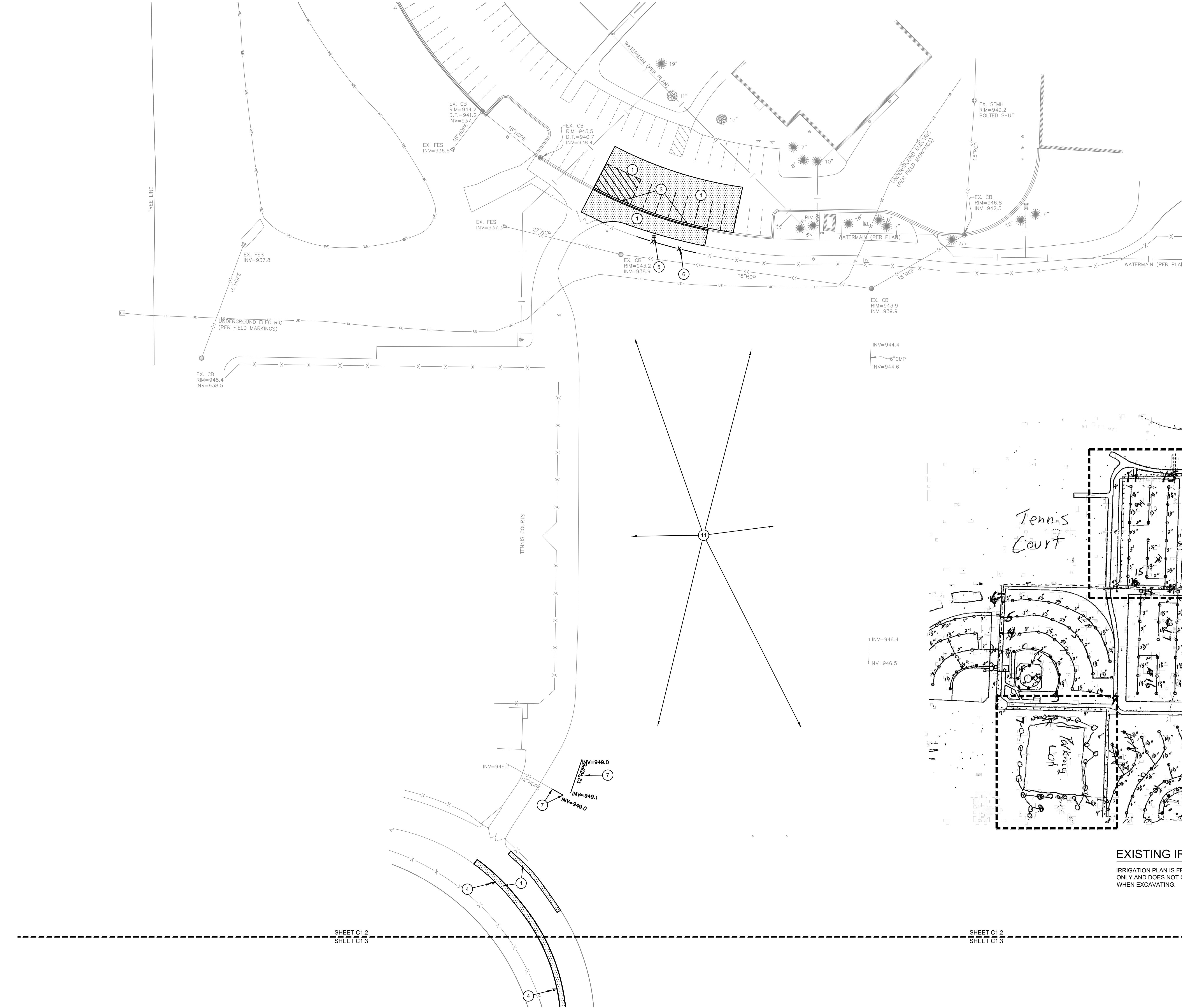


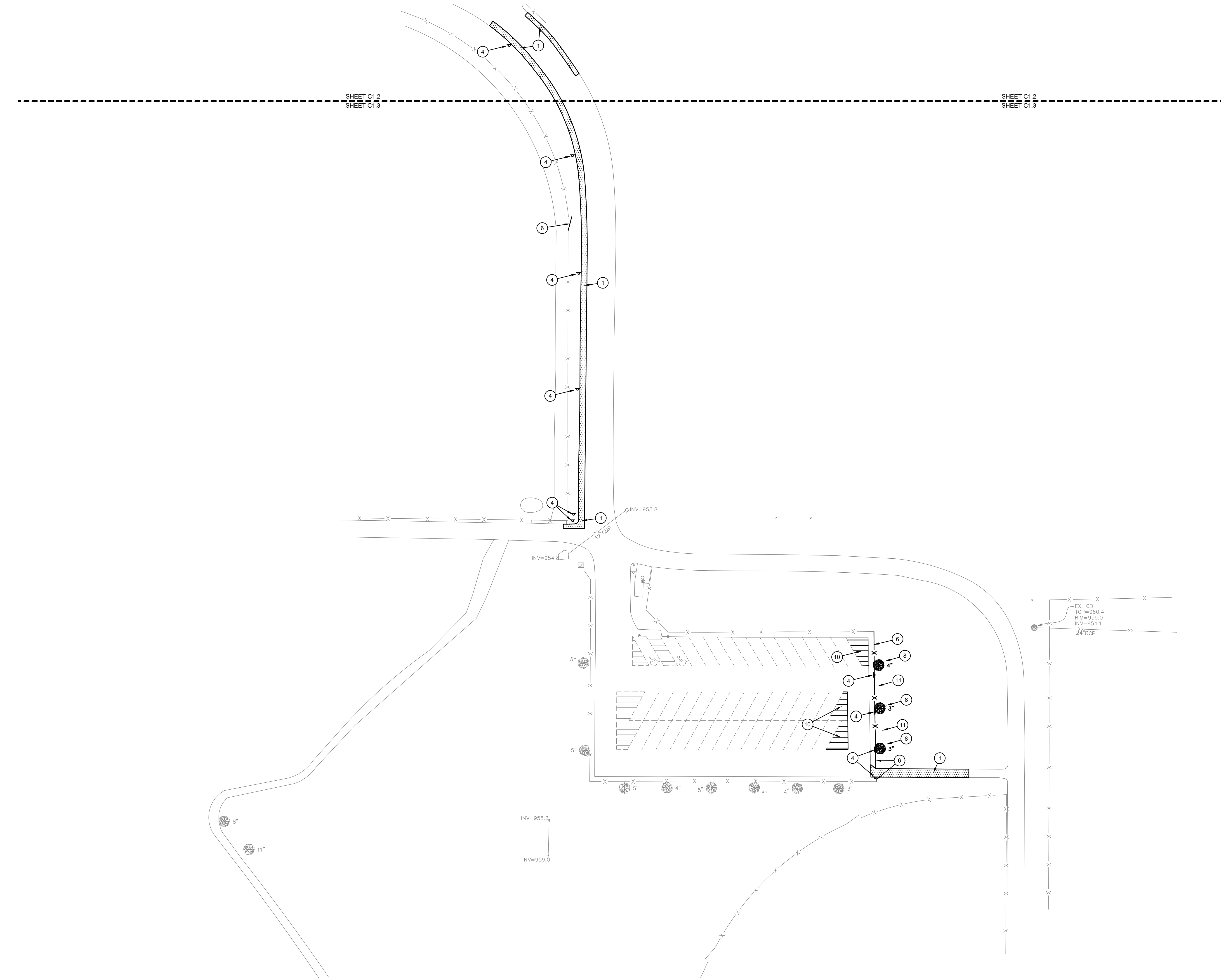
MITCHELL HONDA, P.E.
License Number: E-162124-6 Date: 06.05.2025

Project Number:
12256156

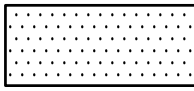
Sheet Title:
**DEMOLITION
PLAN
NORTH**

Sheet Number:
C1.1

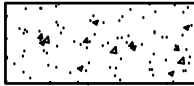




SYMBOL LEGEND



REMOVE AND DISPOSE OF EXISTING
BITUMINOUS PAVEMENT SECTION



REMOVE AND DISPOSE OF EXISTING
CONCRETE PAVEMENT SECTION

KEY NOTES

- 1 REMOVE AND DISPOSE OF BITUMINOUS PAVEMENT.
- 2 REMOVE AND DISPOSE OF CONCRETE PAVEMENT.
- 3 REMOVE AND DISPOSE OF CONCRETE CURB AND GUTTER.
- 4 SALVAGE SIGN FOR REINSTALLATION. REMOVE AND DISPOSE OF POST AND ANY ASSOCIATED FOOTING.
- 5 REMOVE AND DISPOSE OF LIGHT POLE, AND FOOTING. COORDINATE DISCONNECTION WITH ELECTRICAL.
- 6 REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE, POSTS, AND FOOTINGS.
- 7 REMOVE AND DISPOSE OF STORM SEWER.
- 8 REMOVE TREE, STUMP, AND ROOTS.
- 9 REMOVE AND SALVAGE CASTING FOR REINSTALLATION.
- 10 REMOVE PAVEMENT STRIPING.
- 11 CONTRACTOR TO REMOVE EXISTING IRRIGATION UNDER NEW PARKING LOTS. COORDINATE REMOVALS WITH OWNER TO MAINTAIN SYSTEM FUNCTIONALITY. SEE EXISTING IRRIGATION PLAN ON SHEET C1.2.
- 12 TRAIL NOT TO BE REMOVED UNTIL THE PROJECT CREATING THE NEW TRAIL FROM CEMETERY ROAD TO THE HIGH SCHOOL IS COMPLETE.
- 11 ADJUST/EXTEND CLEANOUT AS NEEDED, SEE UTILITY PLAN NORTH.
- P PROTECT.

DEMOLITION NOTES

1. Contractor shall field verify all existing utility locations and site conditions throughout the project extents.
2. It is the responsibility of the Contractor to perform or coordinate all necessary utility demolitions and relocations from existing utility locations to all onsite amenities and buildings to complete the work. These connections may include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
3. Prior to beginning work, contact Diggers Hotline 811 or (800-242-8511) to locate utilities throughout the area under construction. The Contractor shall retain the services of a private utility locator to locate the private utilities.
4. Sawcut along the edges of pavements, sidewalks, and curbs to remain. Unless otherwise indicated, concrete removals shall extend to the nearest existing joint.
5. All construction shall be performed in accordance with state and local standard specifications for construction.

Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:

DATE	DESCRIPTION
------	-------------

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (T) 651.481.9201
www.larsonengr.com

©2025 Larson Engineering, Inc. All rights reserved.
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 WISCONSIN



MITCHELL HONDA, P.E.
License Number: E-102124-0 Date: 06.05.2025

Project Number:

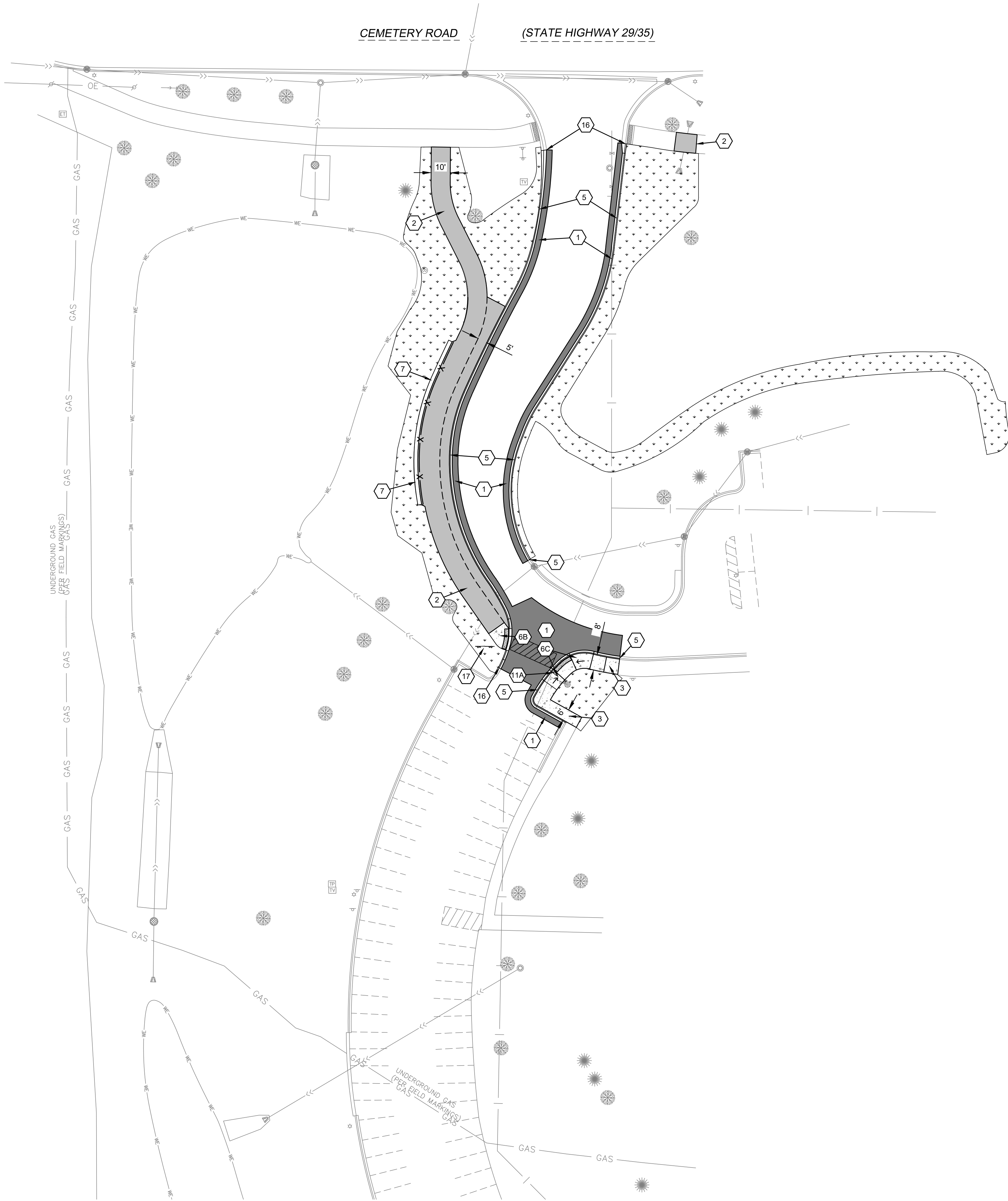
12256156

Sheet Title:

**DEMOLITION
PLAN
SOUTH**

Sheet Number:

C1.3

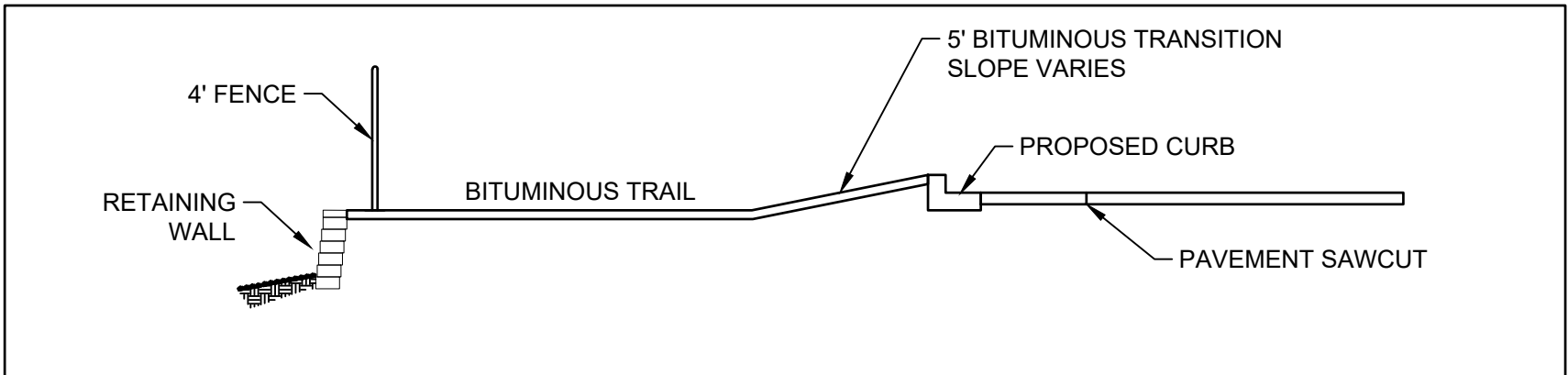


SYMBOL LEGEND

	NEW BITUMINOUS, SEE DETAIL 2/C5.1
	NEW TRAIL BITUMINOUS, SEE DETAIL 1/C5.1
	NEW CONCRETE PAVEMENT, SEE DETAIL 3/C5.1
	NEW AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2
	NEW TOPSOIL AND SEED.
	PAVEMENT MARKINGS -VEHICLE STALLS/ARROWS/CROSSWALKS (WHITE)

KEY NOTES

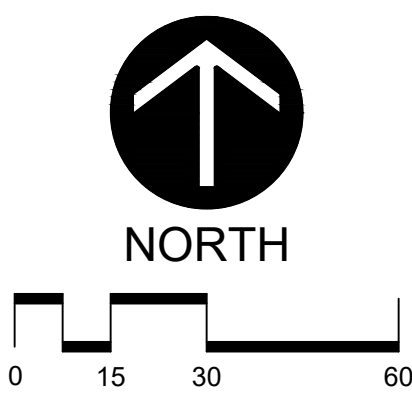
- 1 BITUMINOUS PAVEMENT, SEE DETAIL 2/C5.1
- 2 TRAIL BITUMINOUS PAVEMENT, SEE DETAIL 1/C5.1
- 3 CONCRETE PAVEMENT, SEE DETAIL 3/C5.1
- 4 AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2
- 5 D18 CONCRETE CURB AND GUTTER, SEE DETAIL 4/C5.1
- 6 ACCESSIBLE RAMP
_A: TYPE II, SEE DETAIL 5/C5.1
_B: ADA LANDING WITH TRUNCATED DOMES, SEE DETAIL 6/C5.1
_C: TYPE II WITH TRUNCATED COMES, SEE DETAIL 5/C5.1
- 7 RETAINING WALL AND 4' BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 7/C5.1
- 8 4' BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 8/C5.1
- 9 VEHICULAR TRAFFIC GATE, SEE DETAIL 10/C5.2
- 10 TRENCH DRAIN, SEE DETAIL 10/C5.1
- 11 SIGN AND POST, SEE DETAIL 11/C5.1
_A: STOP (SALVAGED)
_B: PARKING IN DESIGNATED SPACES ONLY (SALVAGED - INSTALLED ON FENCE)
_C: NO PARKING (SALVAGED)
_D: NO PARKING (SALVAGED & INSTALLED ON FENCE)
_E: PEDESTRIAN CROSSING (SALVAGED)
_F: DO NOT ENTER
_G: ADA PARKING
_H: WALKING PATH ONLY NO MOTORIZED VEHICLES (SALVAGED)
- 12 NEW LIMESTONE BOULDER MATCH EXISTING FROM WESTERN PORTION OF EXISTING DRIVEWAY
- 13 RAIN GUARDIAN TURRET, SEE DETAIL 1/C5.3
- 14 CONTRACTOR TO REMOVE, SALVAGE, AND REINSTALL FENCE FABRIC AND POSTS AS NECESSARY TO CONSTRUCT CONCRETE SIDEWALK
- 15 GALVANIZED CHAIN LINK SINGLE SWING GATE, SEE DETAIL 9/C5.1
- 16 TAPER CURB TO MATCH EXISTING
- 17 INSTALL SALVAGED DIRECTIONAL SIGN
- 18 TAPER CURB



TRAIL CROSS SECTION
AT RETAINING WALL

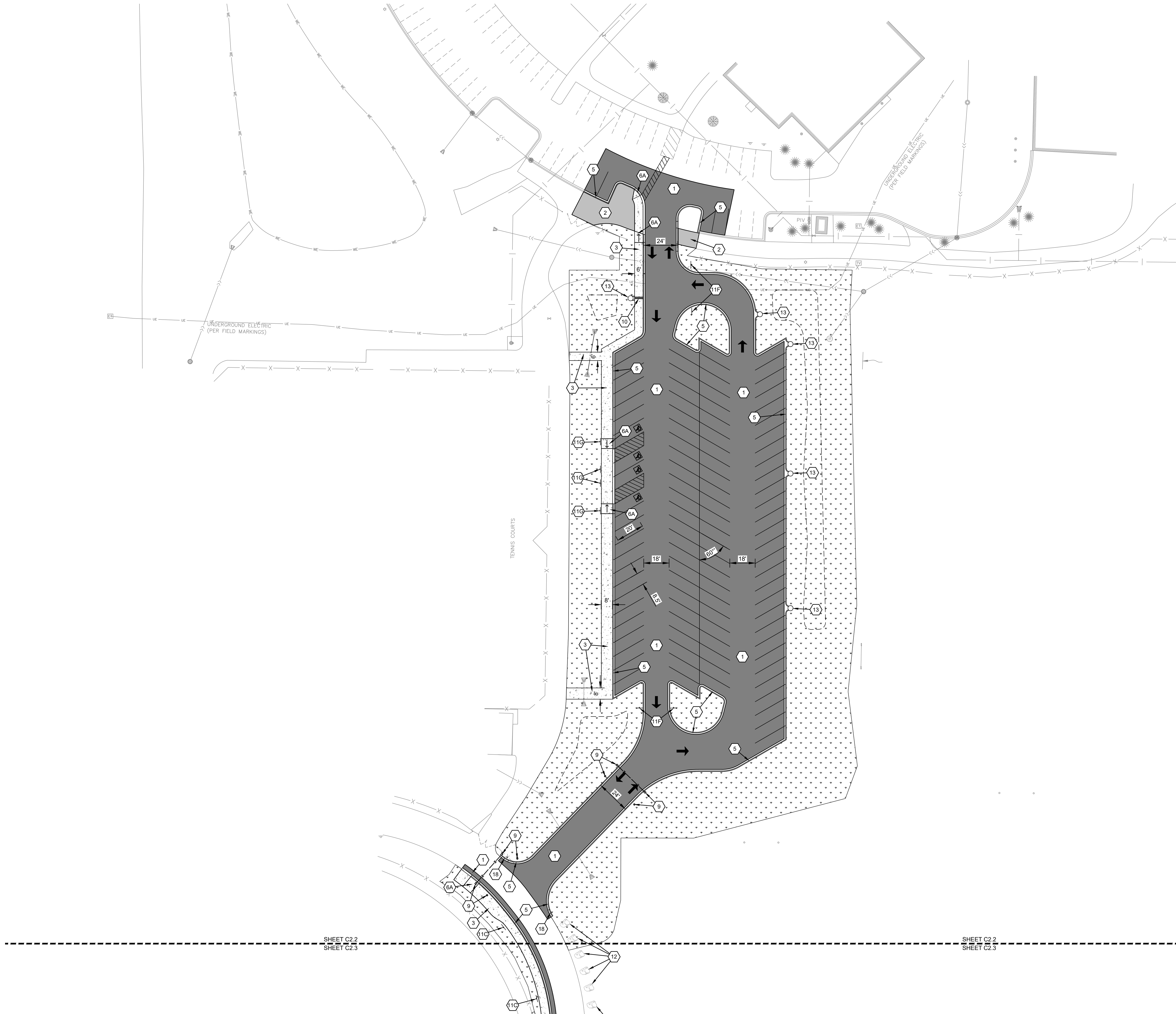
1
C2.1

NOT TO SCALE



REVISIONS:

DATE	DESCRIPTION
------	-------------



SYMBOL LEGEND

NEW BITUMINOUS, SEE DETAIL 2/C5.1

NEW TRAIL BITUMINOUS, SEE DETAIL 1/C5.1

NEW CONCRETE PAVEMENT, SEE DETAIL 3/C5.1

NEW AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2

NEW TOPSOIL AND SEED.

PAVEMENT MARKINGS
-VEHICLE STALLS/ARROWS/CROSSWALKS (WHITE)

- KEY NOTES
- 1

BITUMINOUS PAVEMENT, SEE DETAIL 2/C5.1
- 2

TRAIL BITUMINOUS PAVEMENT, SEE DETAIL 1/C5.1
- 3

CONCRETE PAVEMENT, SEE DETAIL 3/C5.1
- 4

AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2
- 5

D18 CONCRETE CURB AND GUTTER, SEE DETAIL 4/C5.1
- 6

ACCESSIBLE RAMP

A: TYPE II, SEE DETAIL 5/C5.1

B: ADA LANDING WITH TRUNCATED DOMES, SEE DETAIL 6/C5.1

C: TYPE II WITH TRUNCATED COMES, SEE DETAIL 5/C5.1
- 7

RETAINING WALL AND 4" BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 7/C5.1
- 8

4" BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 8/C5.1
- 9

VEHICULAR TRAFFIC GATE, SEE DETAIL 10/C5.2
- 10

TRENCH DRAIN, SEE DETAIL 10/C5.1
- 11

SIGN AND POST, SEE DETAIL 11/C5.1

A: STOP (SALVAGED)

B: PARKING IN DESIGNATED SPACES ONLY (SALVAGED - INSTALLED ON FENCE)

C: NO PARKING (SALVAGED)

D: NO PARKING (SALVAGED & INSTALLED ON FENCE)

E: PEDESTRIAN CROSSING (SALVAGED)

F: DO NOT ENTER

G: ADA PARKING

H: WALKING PATH ONLY NO MOTORIZED VEHICLES (SALVAGED)
- 12

NEW LIMESTONE BOULDER MATCH EXISTING FROM WESTERN PORTION OF EXISTING DRIVEWAY
- 13

RAIN GUARDIAN TURRET, SEE DETAIL 1/C5.3
- 14

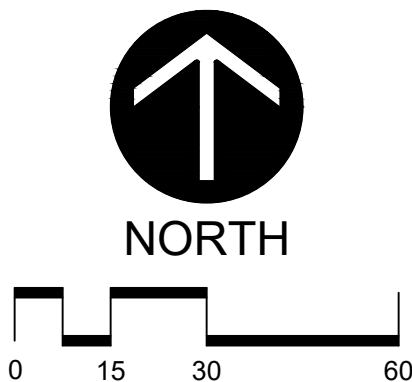
CONTRACTOR TO REMOVE, SALVAGE, AND REINSTALL FENCE FABRIC AND POSTS AS NECESSARY TO CONSTRUCT CONCRETE SIDEWALK
- 15

GALVANIZED CHAIN LINK SINGLE SWING GATE, SEE DETAIL 9/C5.1
- 16

TAPER CURB TO MATCH EXISTING
- 17

INSTALL SALVAGED DIRECTIONAL SIGN
- 18

TAPER CURB



BRAY

ARCHITECTS

Milwaukee

829 South 1st Street
Milwaukee, Wisconsin 53204
T: 414.226.0200

Sheboygan • Davenport • Saint Paul

www.brayarch.com

Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:

DATE

DESCRIPTION

Larson

Engineering, Inc.

3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (T) 651.481.9201
www.larsonengr.com

©2025 Larson Engineering, Inc. All rights reserved.
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 WISCONSIN

WISCONSIN

PROFESSIONAL ENGINEER

MITCHELL HONSA, P.E.

License Number: E-192124-B Date: 06.05.2025

Project Number:

12256156

Sheet Title:

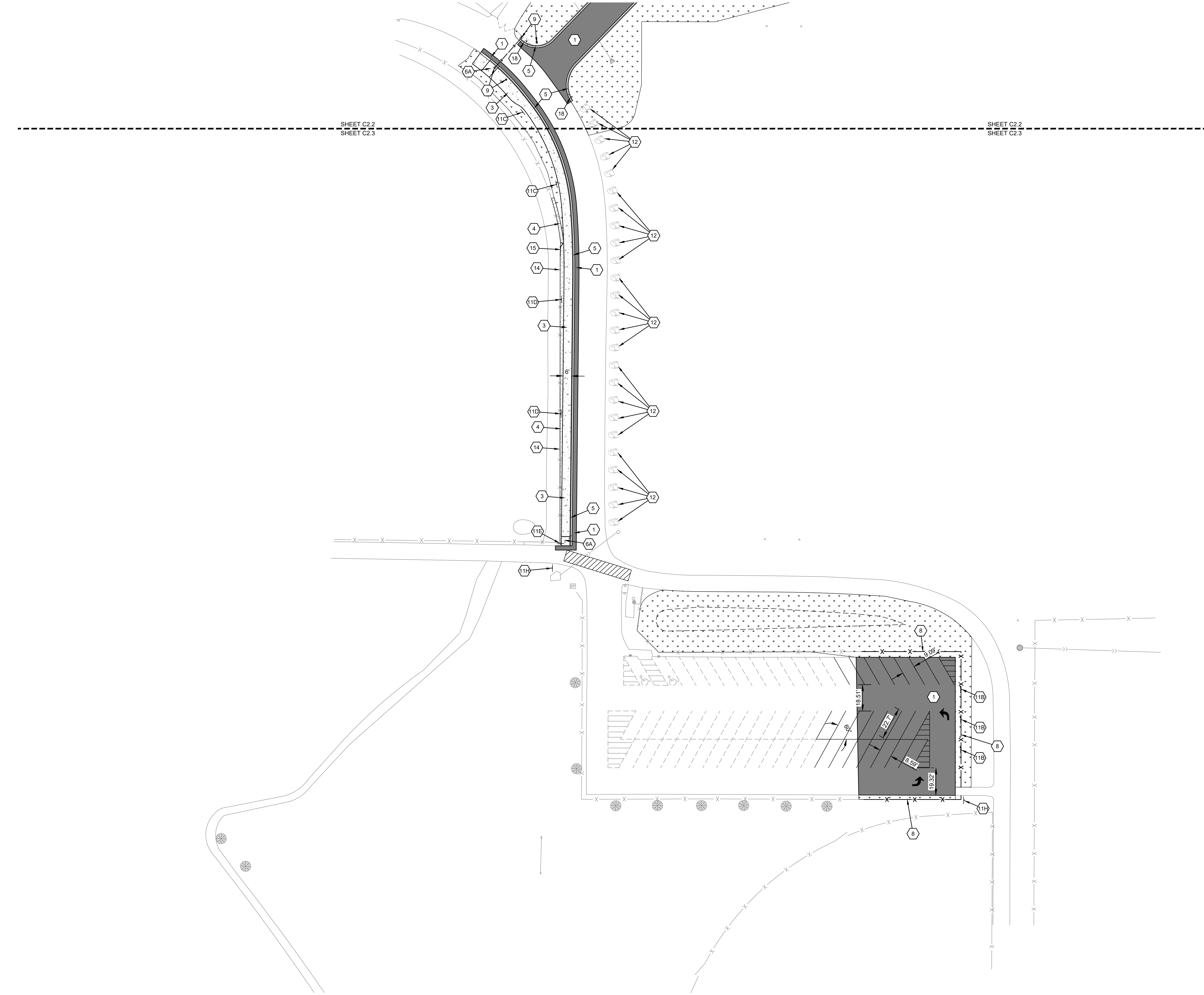
SITE PLAN
CENTRAL

Sheet Number:

C2.2

8

© 2025 Bray Associates Architects, Inc.

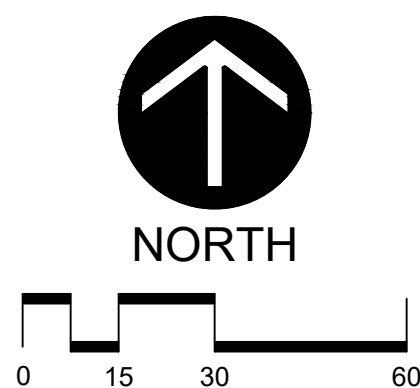


SYMBOL LEGEND

	NEW BITUMINOUS, SEE DETAIL 2/C5.1
	NEW TRAIL BITUMINOUS, SEE DETAIL 1/C5.1
	NEW CONCRETE PAVEMENT, SEE DETAIL 3/C5.1
	NEW AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2
	NEW TOPSOIL AND SEED.
	PAVEMENT MARKINGS -VEHICLE STALLS/ARROWS/CROSSWALKS (WHITE)

KEY NOTES

- 1 BITUMINOUS PAVEMENT, SEE DETAIL 2/C5.1
- 2 TRAIL BITUMINOUS PAVEMENT, SEE DETAIL 1/C5.1
- 3 CONCRETE PAVEMENT, SEE DETAIL 3/C5.1
- 4 AG-LIME WARNING TRACK, SEE DETAIL 8/C5.2
- 5 D18 CONCRETE CURB AND GUTTER, SEE DETAIL 4/C5.1
- 6 ACCESSIBLE RAMP
_A: TYPE II, SEE DETAIL 5/C5.1
_B: ADA LANDING WITH TRUNCATED DOMES, SEE DETAIL 6/C5.1
_C: TYPE II WITH TRUNCATED COMES, SEE DETAIL 5/C5.1
- 7 RETAINING WALL AND 4' BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 7/C5.1
- 8 4' BLACK VINYL CHAIN LINK FENCE, SEE DETAIL 8/C5.1
- 9 VEHICULAR TRAFFIC GATE, SEE DETAIL 10/C5.2
- 10 TRENCH DRAIN, SEE DETAIL 10/C5.1
- 11 SIGN AND POST, SEE DETAIL 11/C5.1
_A: STOP (SALVAGED)
_B: PARKING IN DESIGNATED SPACES ONLY (SALVAGED - INSTALLED ON FENCE)
_C: NO PARKING (SALVAGED)
_D: NO PARKING (SALVAGED & INSTALLED ON FENCE)
_E: PEDESTRIAN CROSSING (SALVAGED)
_F: DO NOT ENTER
_G: ADA PARKING
_H: WALKING PATH ONLY NO MOTORIZED VEHICLES (SALVAGED)
- 12 NEW LIMESTONE BOULDER MATCH EXISTING FROM WESTERN PORTION OF EXISTING DRIVEWAY
- 13 RAIN GUARDIAN TURRET, SEE DETAIL 1/C5.3
- 14 CONTRACTOR TO REMOVE, SALVAGE, AND REINSTALL FENCE FABRIC AND POSTS AS NECESSARY TO CONSTRUCT CONCRETE SIDEWALK
- 15 GALVANIZED CHAIN LINK SINGLE SWING GATE, SEE DETAIL 9/C5.1
- 16 TAPER CURB TO MATCH EXISTING
- 17 INSTALL SALVAGED DIRECTIONAL SIGN
- 18 TAPER CURB



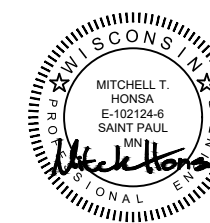
Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:

DATE	DESCRIPTION
------	-------------

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengi.com

©2025 Larson Engineering, Inc. All rights reserved.
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 **WISCONSIN**



MITCHELL HONZA, P.E.
License Number: E-192124-6 Date: 06.05.2025

Project Number:

12256156

Sheet Title:

**SITE PLAN
SOUTH**

Sheet Number:

C2.3

1. Tree protection consisting of snow fence or safety fence installed at the drip line shall be in place prior to beginning any grading or demolition work at the site.
2. All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
3. Grades shown in paved areas represent finish elevation.
4. All disturbed areas to receive 4" of good quality topsoil and seed.
5. All construction shall be performed in accordance with state and local standard specifications for construction.

- 1 SILT FENCE, SEE DETAIL 12/C5.1
- 2 SEDIMENT LOG, SEE DETAIL 13/C5.1
- 3 ROCK CONST. ENTRANCE, SEE DETAILS 14/C5.1
- 4 EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2
- 5 INLET PROTECTION, SEE DETAIL 3/C5.2
- 6 RIP RAP AT OUTLETS, SEE DETAIL 15/C5.1
- 7 RAIN GUARDIAN WITH RIP RAP, SEE DETAIL 1/C5.2
- 8 RIP RAP OVERFLOW, SEE DETAIL 6/C5.2

EXISTING CONTOURS
PROPOSED CONTOURS - MAJOR INTERVAL
PROPOSED CONTOURS - MINOR INTERVAL
GRADE BREAK LINE
GRADE SLOPE

2.0%

SILT FENCE, SEE DETAIL 12/C5.1
SEDIMENT LOG, SEE DETAIL 13/C5.1

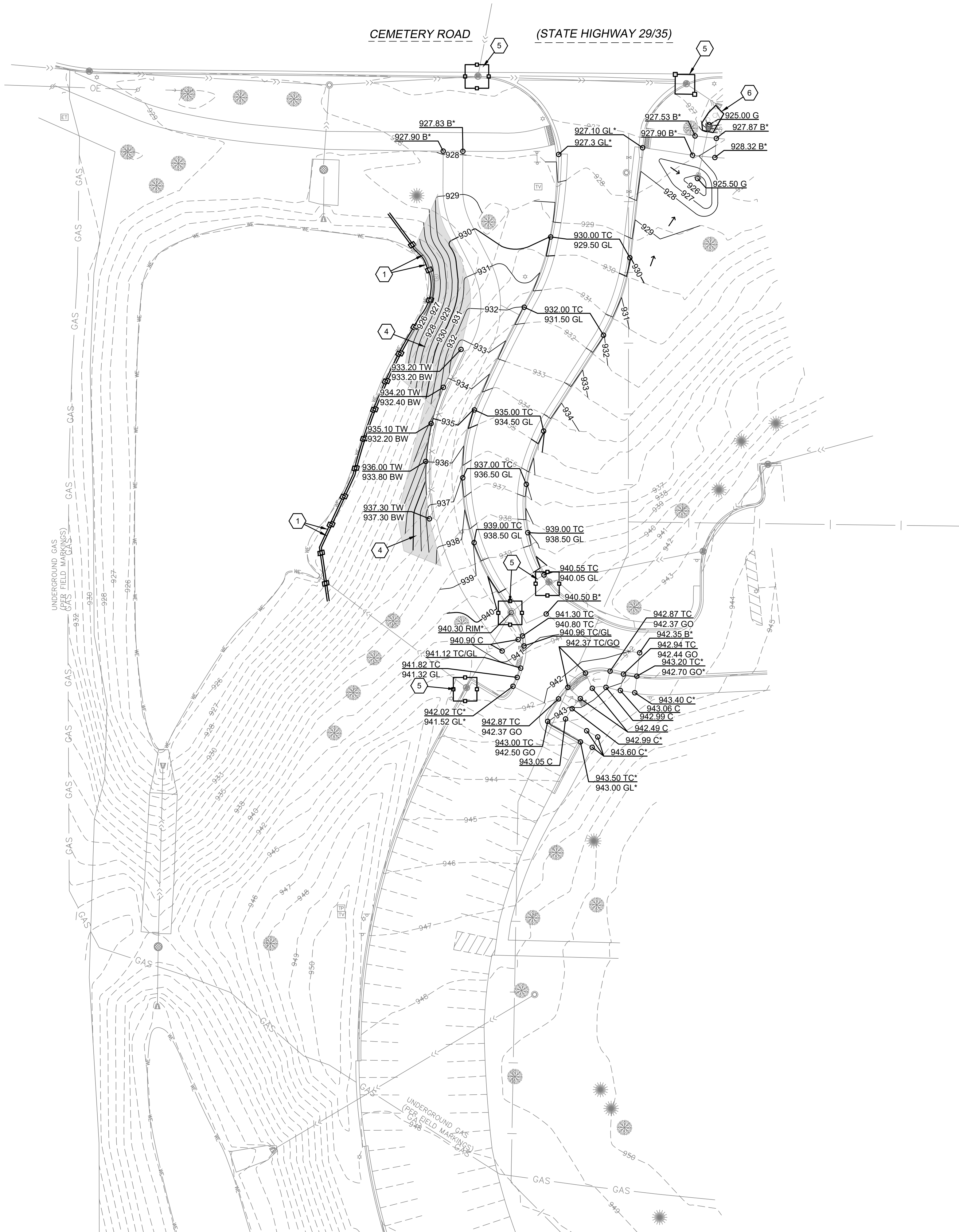
RIP-RAP / ROCK CONST. ENTRANCE,
SEE DETAILS 14/C5.1, 15/C5.1, 11/C5.2, AND 6/C5.2

EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2

INLET PROTECTION, SEE DETAIL 3/C5.2

SPOT ABBREVIATIONS:
TC - TOP OF CURB
GL - GUTTER LINE
GO - GUTTER OUT
B - BITUMINOUS
C - CONCRETE
EO - EMERGENCY OVERTFLOW
TW - TOP OF WALL
BW - BOTTOM OF WALL (F/G)
G - GRADE
(*) - EXISTING TO BE VERIFIED

1. Owner and Contractor shall permit WDNDR-NPDES permit. Contractor shall be responsible for all fees pertaining to this permit. The SWPPP shall be kept on-site at all times.
2. Install temporary erosion control measures (silt prevention, silt fence, and rock construction entrances) prior to beginning any excavation or demolition work at the site.
3. Erosion control measures shown on the erosion control plan are the absolute minimum. The contractor shall install temporary earth dikes, sediment traps or basins, additional siltation fencing, and/or disk the soil parallel to the contours as deemed necessary to further control erosion. All changes shall be recorded in the SWPPP.
4. All construction site entrances shall be surfaced with crushed rock across the entire width of the entrance and from the entrance to a point 50' into the construction zone.
5. The toe of the silt fence shall be trenched in a minimum of 6". The trench backfill shall be compacted with a vibratory plate compactor.
6. All grading operations shall be conducted in a manner to minimize the potential for site erosion. Sediment control practices must be established on all down graded perimeters before any up gradient land disturbing activities begin.
7. All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement.
8. Pipe outlets must be provided with energy dissipation within 24 hours of connection to surface water.
9. All riprap shall be installed with a filter material or soil separation fabric and comply with the local Department of Transportation Standard Specifications.
10. All storm sewers discharging into wetlands or water bodies shall outlet at or below the normal water level of the respective wetland or water body at an elevation where the downstream slope is 1 percent or flatter. The normal water level shall be the invert elevation of the outlet of the wetland or water body.
11. All storm sewer catch basins not entering the site drainage during construction shall be covered to prevent runoff from entering the storm sewer system. Catch basins necessary for site drainage during construction shall be provided with inlet protection.
12. In areas where concentrated flows occur (such as swales and areas in front of storm catch basins and intakes) the erosion control facilities shall be backed by stabilization structure to protect those facilities from the concentrated flows.
13. Inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. All inspections shall be recorded in the SWPPP.
14. All BMPs must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the capacity of the BMP. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access. All repairs shall be recorded in the SWPPP.
15. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
16. All soils tracked onto pavement shall be removed daily.
17. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activity is reaching the intake waters, including ditchwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
18. Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with WDNDR disposal requirements.
19. Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other releases. Restricted access to storage areas must be provided to prevent vandalism. Storage of hazardous waste must be in compliance with WDNDR regulations.
20. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed onsite.
21. All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A connected clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with WDNDR regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
22. Upon completion of the project and stabilization of all graded areas, all temporary erosion control facilities (silt fences, hay bales, etc.) shall be removed from the site.
23. All permanent sedimentation basins must be restored to their design condition immediately following stabilization of the site.
24. Contractor shall submit Notice of Termination for WDNDR-NPDES permit within 30 days after Final Stabilization.



1. Tree protection consisting of snow fence or safety fence installed at the drip line shall be in place prior to beginning any grading or demolition work at the site.
2. All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
3. Grades shown in paved areas represent finish elevation.
4. All disturbed areas to receive 4" of good quality topsoil and seed.
5. All construction shall be performed in accordance with state and local standard specifications for construction.

- 1 SILT FENCE, SEE DETAIL 12/C5.1
- 2 SEDIMENT LOG, SEE DETAIL 13/C5.1
- 3 ROCK CONST. ENTRANCE, SEE DETAILS 14/C5.1
- 4 EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2
- 5 INLET PROTECTION, SEE DETAIL 3/C5.2
- 6 RIP RAP AT OUTLETS, SEE DETAIL 15/C5.1
- 7 RAIN GUARDIAN WITH RIP RAP, SEE DETAIL 1/C5.2
- 8 RIP RAP OVERFLOW, SEE DETAIL 6/C5.2

EXISTING CONTOURS
 PROPOSED CONTOURS - MAJOR INTERVAL
 PROPOSED CONTOURS - MINOR INTERVAL
 GRADE BREAK LINE
 GRADE SLOPE
 SILT FENCE, SEE DETAIL 12/C5.1
 SEDIMENT LOG, SEE DETAIL 13/C5.1

RIP-RAP / ROCK CONST. ENTRANCE.
 SEE DETAILS 14/C5.1, 15/C5.1, 11/C5.2, AND 6/C5.2

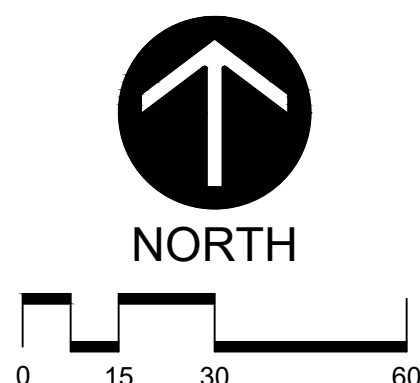
EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2

INLET PROTECTION, SEE DETAIL 3/C5.2

SPOT ABBREVIATIONS:
 TC - TOP OF CURB
 GL - GUTTER LINE
 GO - GUTTER OUT
 B - BITUMINOUS
 C - CONCRETE
 EO - EMERGENCY OVERFLOW
 TW - TOP OF WALL
 BW - BOTTOM OF WALL (F/G)
 G - GRADE
 (*) - EXISTING TO BE VERIFIED

950.00 TC
 949.50 GL

1. SEE SHEET C3.2 FOR EROSION CONTROL NOTES



GRADING NOTES

- Tree protection consisting of snow fence or safety fence installed at the drip line shall be in place prior to beginning any grading or demolition work at the site.
- All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
- Grades shown in paved areas represent finish elevation.
- All disturbed areas to receive 4" of good quality topsoil and seed.
- All construction shall be performed in accordance with state and local standard specifications for construction.

KEY NOTES

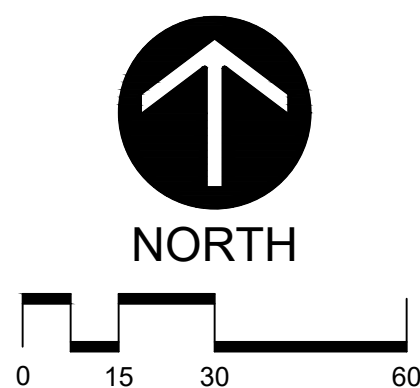
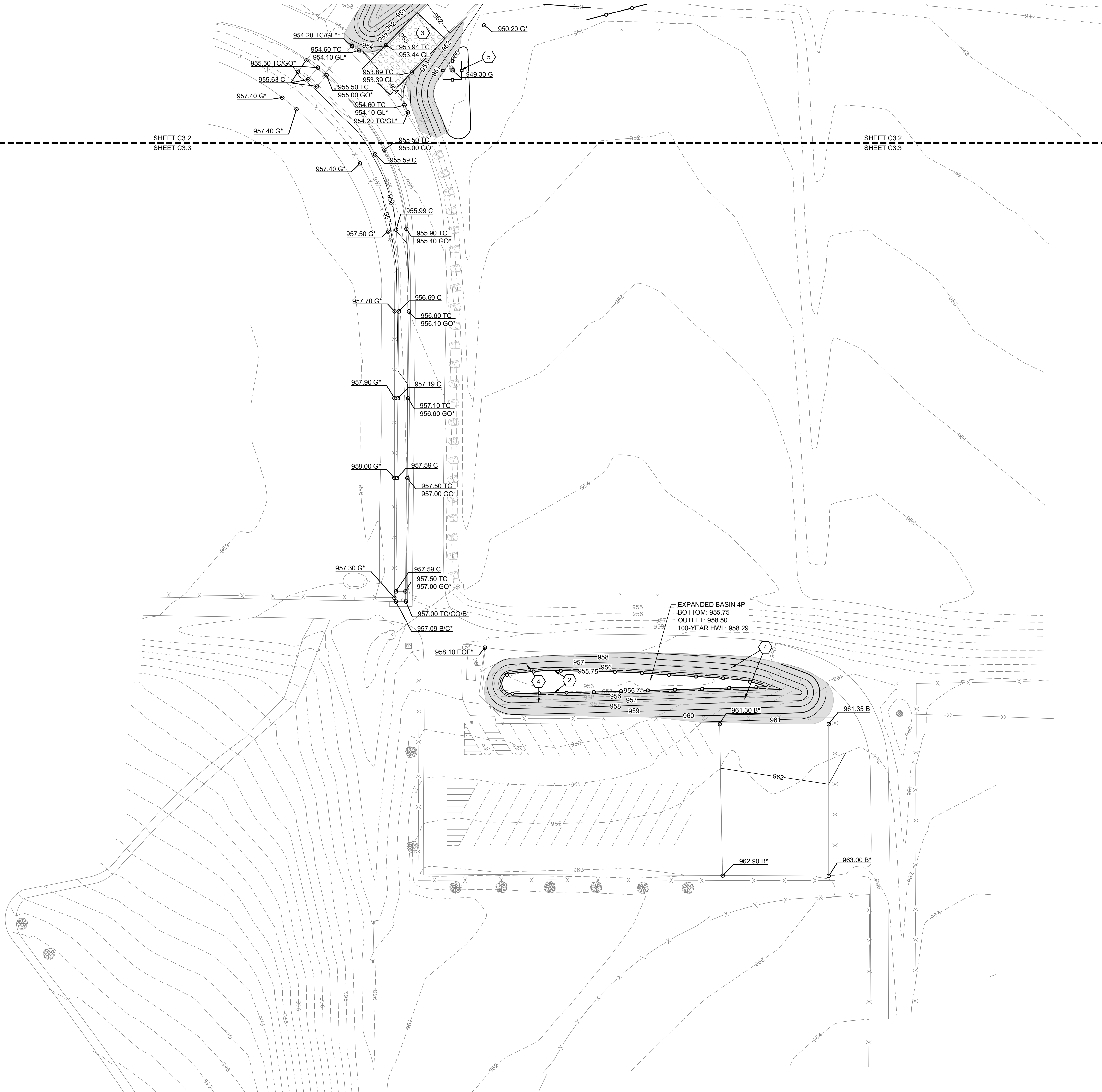
- 1 SILT FENCE, SEE DETAIL 12/C5.1
- 2 SEDIMENT LOG, SEE DETAIL 13/C5.1
- 3 ROCK CONST. ENTRANCE, SEE DETAILS 14/C5.1
- 4 EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2
- 5 INLET PROTECTION, SEE DETAIL 3/C5.2
- 6 RIP RAP AT OUTLETS, SEE DETAIL 15/C5.1
- 7 RAIN GUARDIAN WITH RIP RAP, SEE DETAIL 1/C5.2
- 8 RIP RAP OVERFLOW, SEE DETAIL 6/C5.2

SYMBOL LEGEND

- 950 --- EXISTING CONTOURS
--- 950 --- PROPOSED CONTOURS - MAJOR INTERVAL
--- 949 --- PROPOSED CONTOURS - MINOR INTERVAL
--- 949 --- GRADE BREAK LINE
2.0% GRADE SLOPE
SILT FENCE, SEE DETAIL 12/C5.1
SEDIMENT LOG, SEE DETAIL 13/C5.1
RIP-RAP / ROCK CONST. ENTRANCE, SEE DETAILS 14/C5.1, 15/C5.1, 1/C5.2, AND 6/C5.2
EROSION CONTROL BLANKET, SEE DETAIL 2/C5.2
INLET PROTECTION, SEE DETAIL 3/C5.2
SPOT ABBREVIATIONS:
TC - TOP OF CURB
GL - GUTTER LINE
GO - GUTTER OUT
B - BITUMINOUS
C - CONCRETE
EO - EMERGENCY OVERFLOW
TW - TOP OF WALL
BW - BOTTOM OF WALL (F/G)
G - GRADE
(*) - EXISTING TO BE VERIFIED

EROSION CONTROL NOTES

- SEE SHEET C3.2 FOR EROSION CONTROL NOTES.



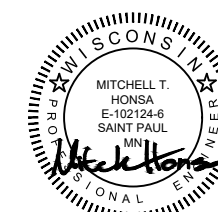
Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
818 Cemetery Rd, River Falls, WI 54022

REVISIONS:

DATE	DESCRIPTION
------	-------------

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengr.com

©2025 Larson Engineering, Inc. All rights reserved.
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 **WISCONSIN**



MITCHELL HONDA, P.E.
License Number: E-102124-0 Date: 06.05.2024

Project Number:

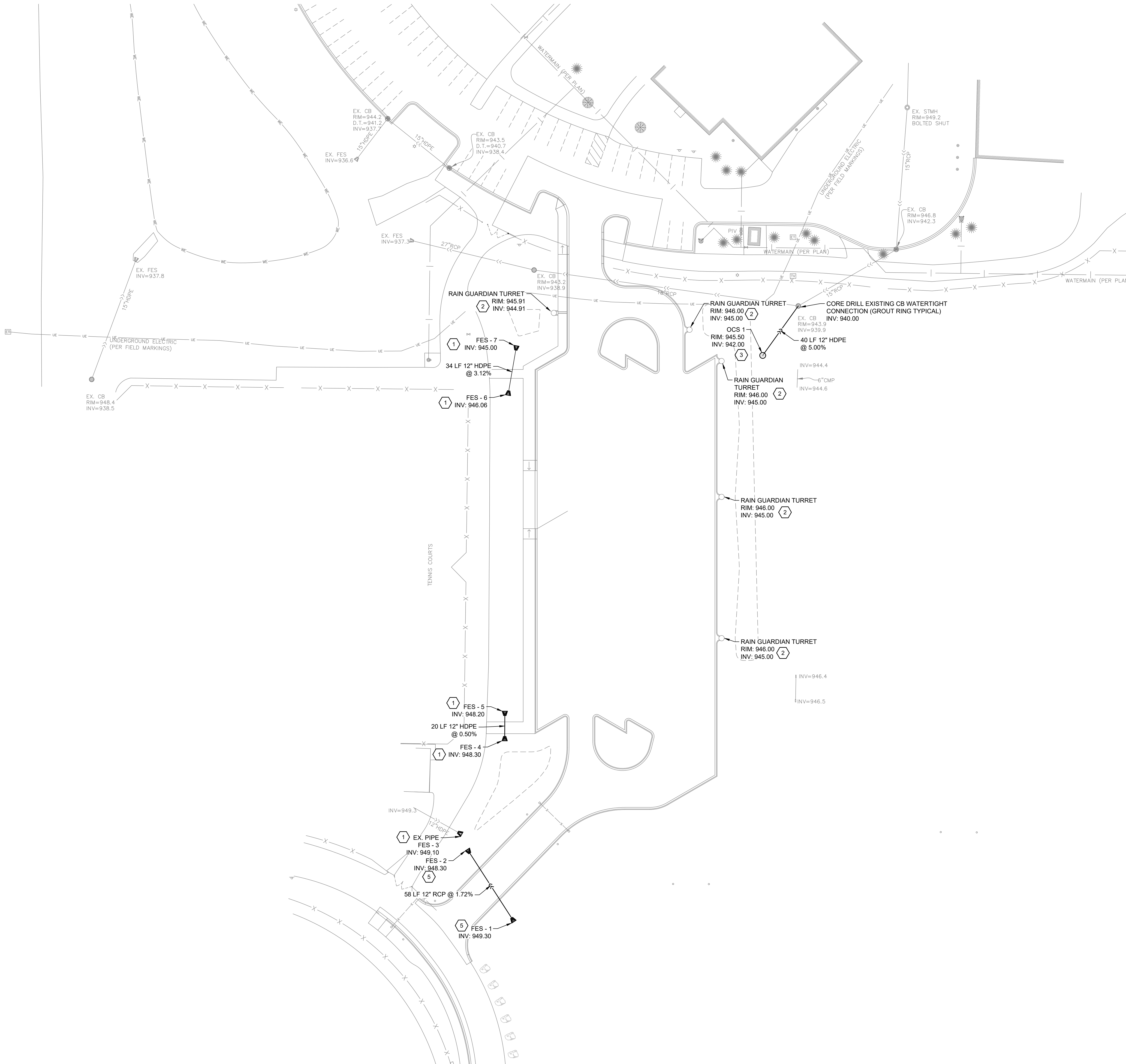
12256156

Sheet Title:

**GRADING &
EROSION
CONTROL
PLAN
SOUTH**

Sheet Number:

C3.3



SYMBOL LEGEND

	STORM MANHOLE		HYDRANT
	CATCH BASIN		GATE VALVE & BOX
	CURB INLET		WATER SHUTOFF
	FLARED END		LIGHT POLE
	SANITARY MANHOLE		
	TELEPHONE LINE		
	ELECTRIC OVERHEAD LINE		
	ELECTRIC UNDERGROUND LINE		
	FIBER OPTIC UNDERGROUND LINE		
	NATURAL GAS UNDERGROUND LINE		
	SANITARY SEWER PIPE		
	STORM SEWER PIPE		
	TELEPHONE UNDERGROUND LINE		
	WATERMAIN PIPE		
	DRAIN TILE PIPE		

KEY NOTES

- 1 FLARED END SECTION, SEE DETAIL 4/C5.2
- 2 RAIN GUARDIAN TURRET, SEE DETAIL 1/C5.3
- 3 OUTLET CONTROL STRUCTURE, SEE DETAIL 5/C5.2
- 4 STORM STRUCTURE ADJUSTMENT, SEE DETAIL 9/C5.2
- 5 RCP FLARED END SECTION, SEE DETAIL 2/C5.3

UTILITY NOTES

1. It is the responsibility of the contractor to perform or coordinate all necessary utility connections and relocations from existing utility locations to the proposed building, as well as to all onsite amenities. These connections include but are not limited to water, sanitary sewer, cable TV, telephone, gas, electric, site lighting, etc.
2. All service connections shall be performed in accordance with state and local standard specifications for construction. Utility connections (sanitary sewer, watermain, and storm sewer) may require a permit from the City.
3. The contractor shall verify the elevations at proposed connections to existing utilities prior to any demolition or excavation. All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
4. The contractor shall notify all appropriate engineering departments and utility companies 72 hours prior to construction. All necessary precautions shall be made to avoid damage to existing utilities.
5. HDPE storm sewer piping shall meet ASTM F2306 and fittings shall meet ASTM D3212 joint pressure test. Installation shall meet ASTM C2321.
6. Maintain a minimum of 7 1/2' of cover over all water lines and sanitary sewer lines. Where 7 1/2' of cover is not provided, install 2" rigid polystyrene insulation with a thermal resistance of at least 5 and a compressive strength of at least 25 psi. Insulation shall be 8" wide, centered over pipe with 6" sand cushion between pipe and insulation. Where depth is less than 5', use 4" of insulation.
7. See Project Specifications for bedding requirements.
8. A structure adjustment shall include removing and salvaging the existing casting assembly, removing existing concrete rings to the precast section. Install new rings and salvaged casting to proposed grades, cleaning casting flange by mechanical means to insure a sound surface and install an external chimney seal from casting to precast section. Chimney seals shall be Infi-Shield Uni-Band or an approved equal.

Pedestrian Safety Improvements and Additional
Parking Lot
River Falls High School
School District of River Falls
816 Cemetery Rd, River Falls, WI 54022

REVISIONS:

DATE	DESCRIPTION
------	-------------

Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengr.com

©2025 Larson Engineering, Inc. All rights reserved.
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 WISCONSIN



MITCHELL HONZA, P.E.
License Number: E-102124-B Date: 06.05.2025

Project Number:

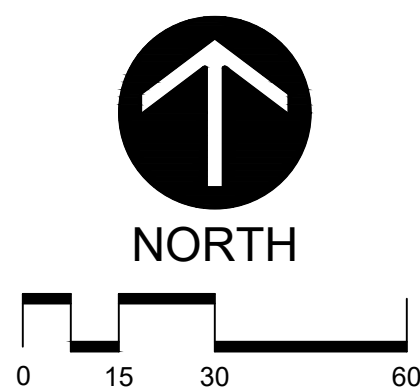
12256156

Sheet Title:

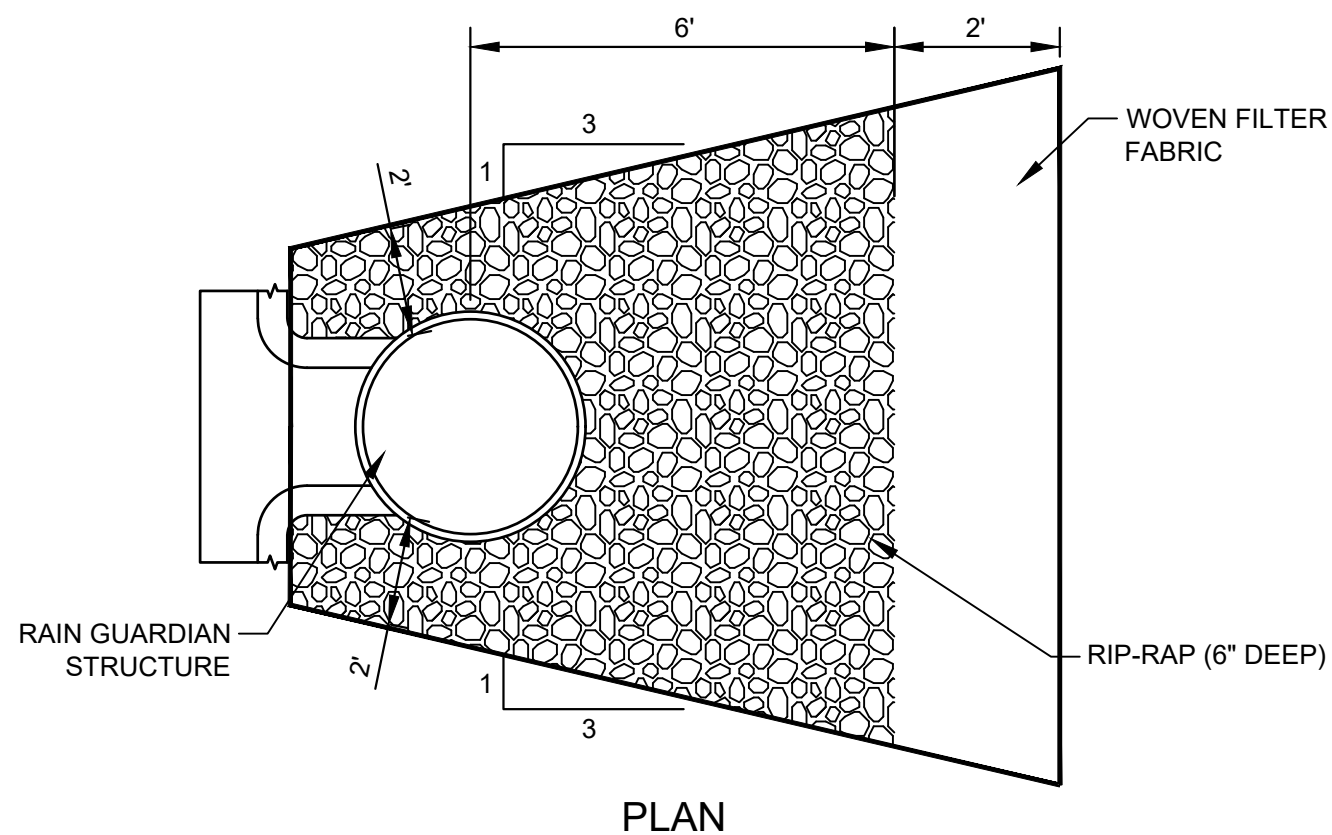
**UTILITY
PLAN
CENTRAL**

Sheet Number:

C4.2





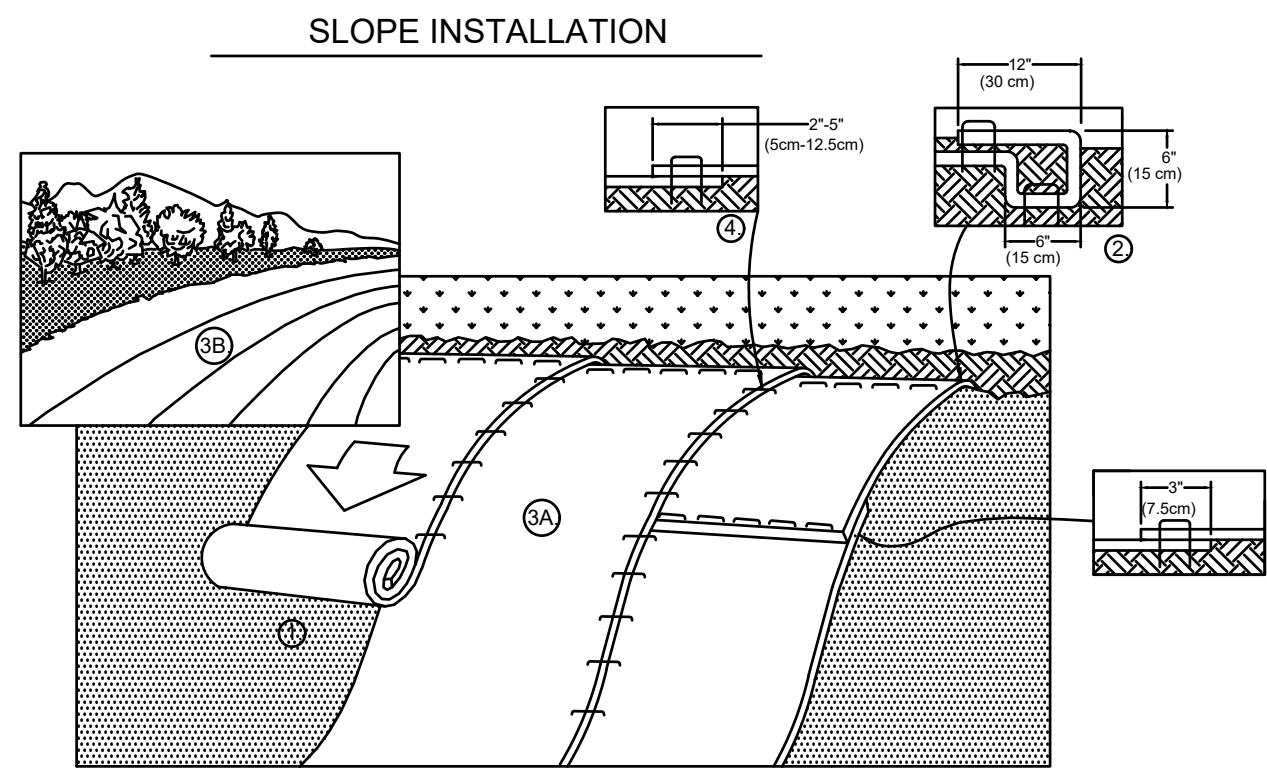


NOTE:
500X MIRAFI FABRIC OR EQUAL

RAIN GUARDAIN WITH RIP-RAP DETAIL

1
C5.2

NOT TO SCALE

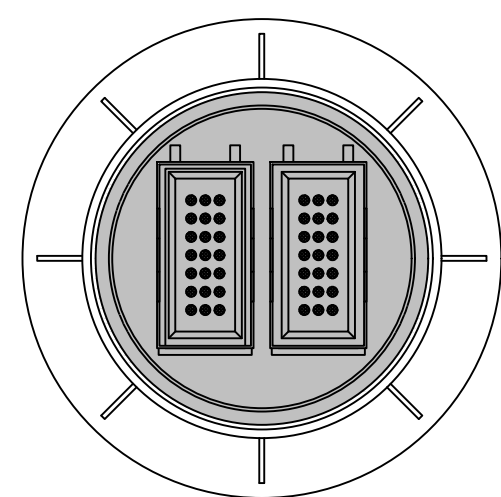


- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
- ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
- CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

2
C5.2

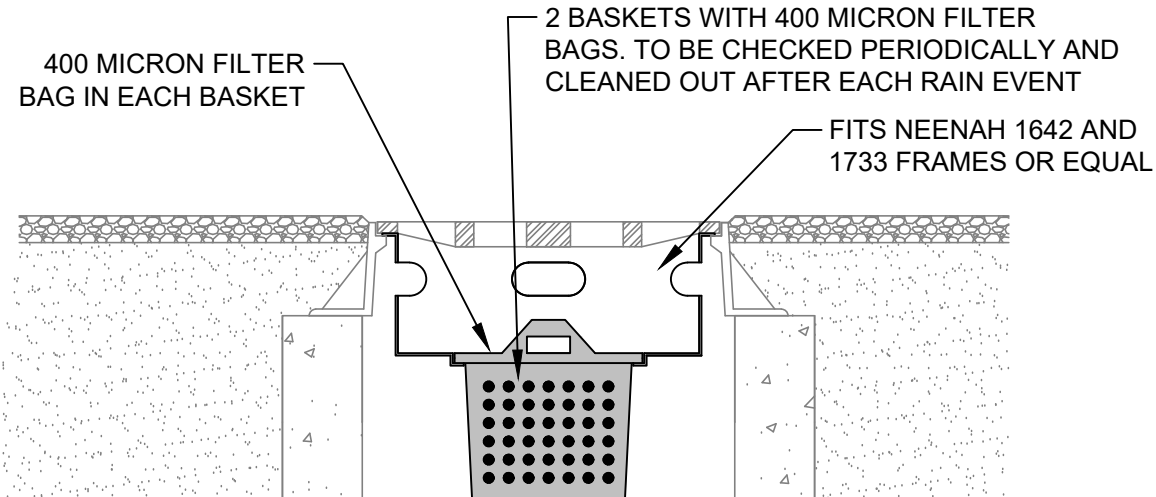
EROSION CONTROL BLANKET

NOT TO SCALE



PLAN

FILTER AREA	5.65 FT ²
OVERFLOW AREA	0.42 FT ²
MAXIMUM OVERFLOW RATE (@ 7" HEAD)	1.99 CFS
MAXIMUM OVERFLOW RATE (@ 13" HEAD)	2.79 CFS
BASKET WEIGHT (EMPTY)	1 LB
BASKET WEIGHT (FULL APPROX.)	45 LBS

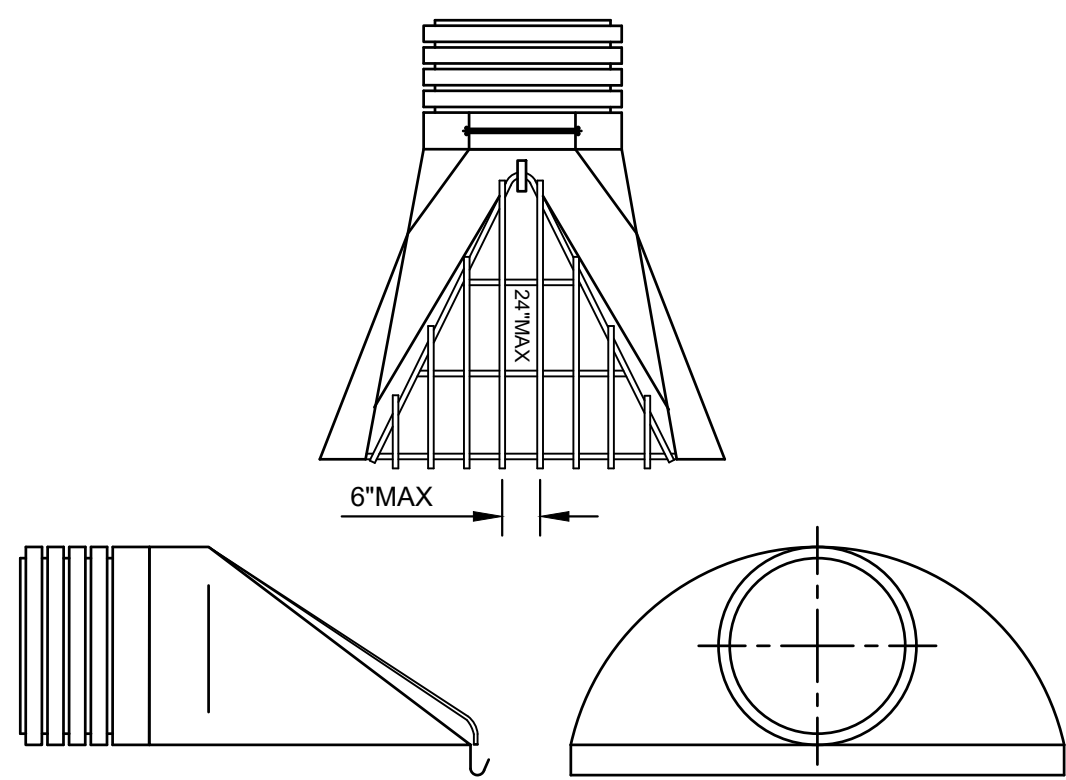


PROFILE

INFRASAFE INLET PROTECTION DEVICE (OR EQ.)

3
C5.2

NOT TO SCALE

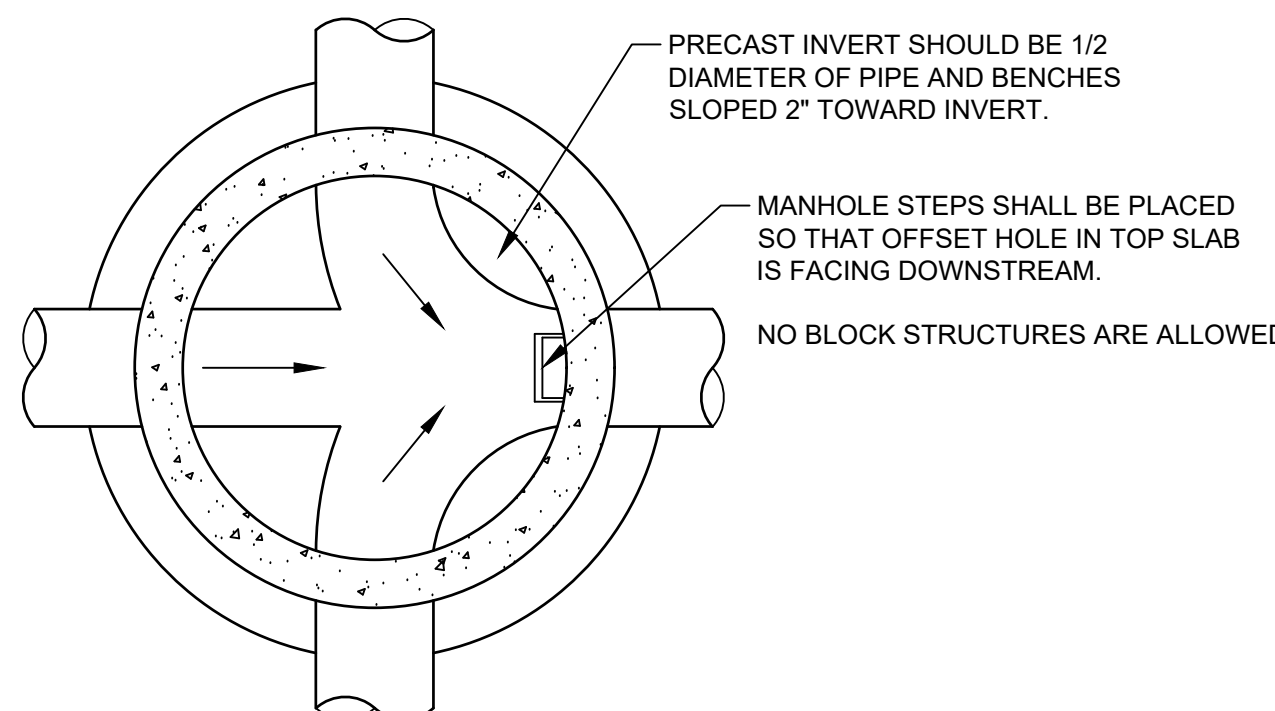


PROVIDE 3 CLIPS TO FASTEN TRASH GUARD TO F.E.S.
HOT DIP GALVANIZE AFTER FABRICATION.

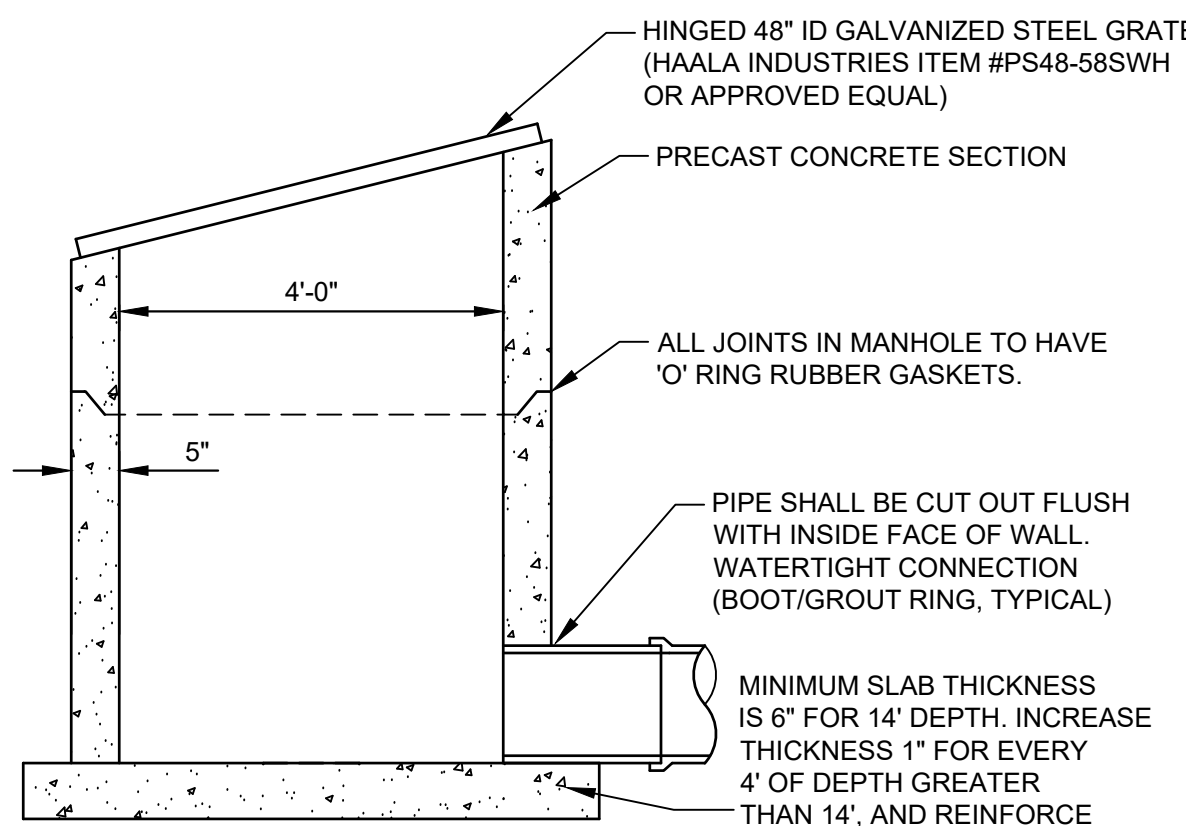
FLARED END SECTION DETAIL

4
C5.2

NOT TO SCALE



PLAN

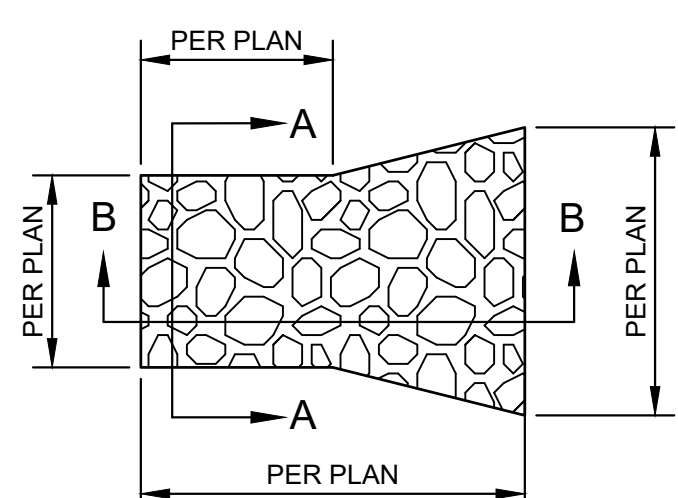


SECTION

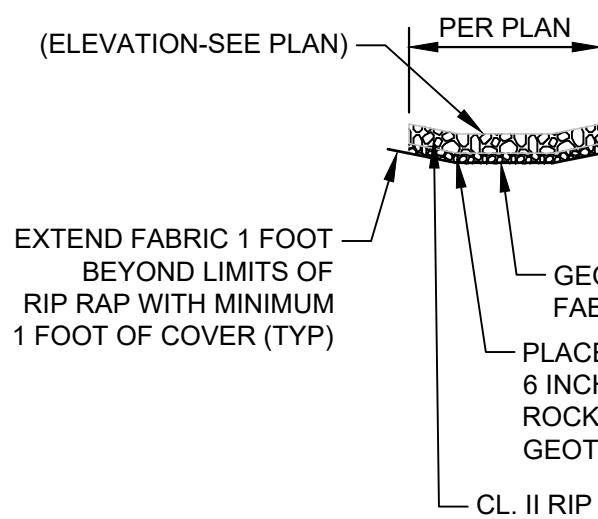
OUTLET CONTROL STRUCTURE MANHOLE DETAIL

5
C5.2

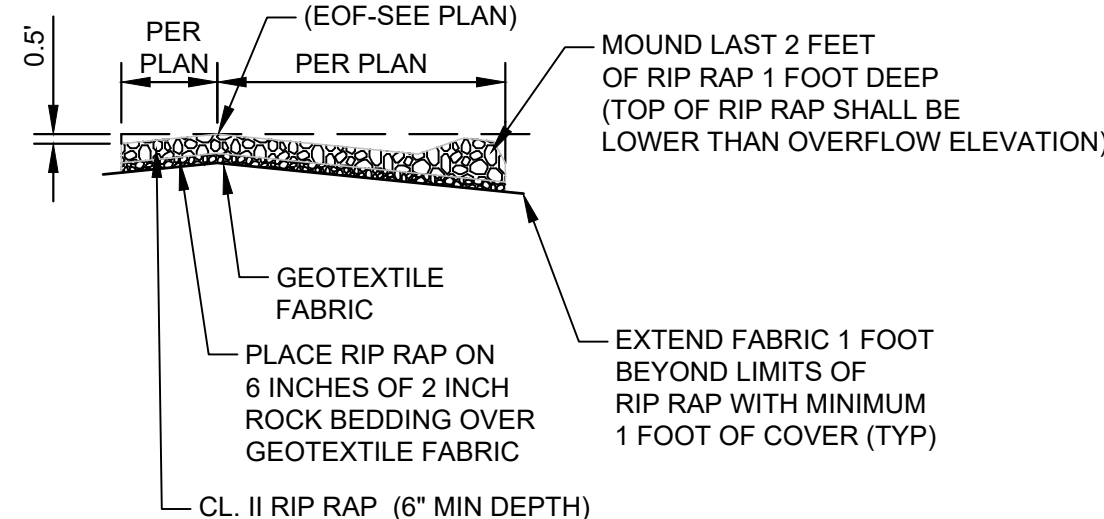
NOT TO SCALE



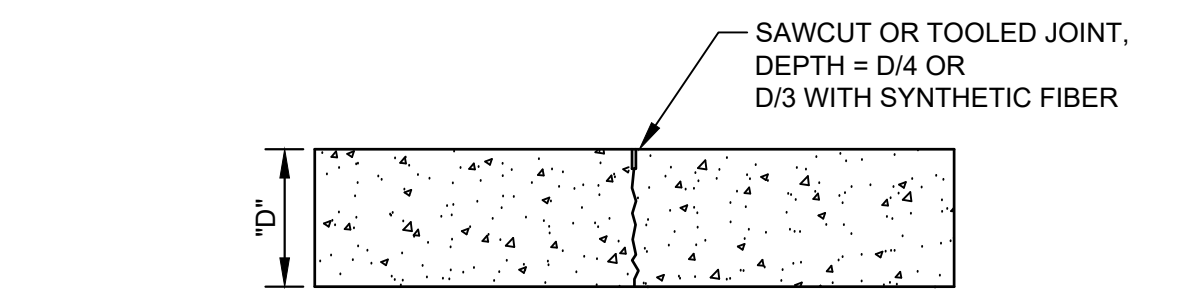
PLAN



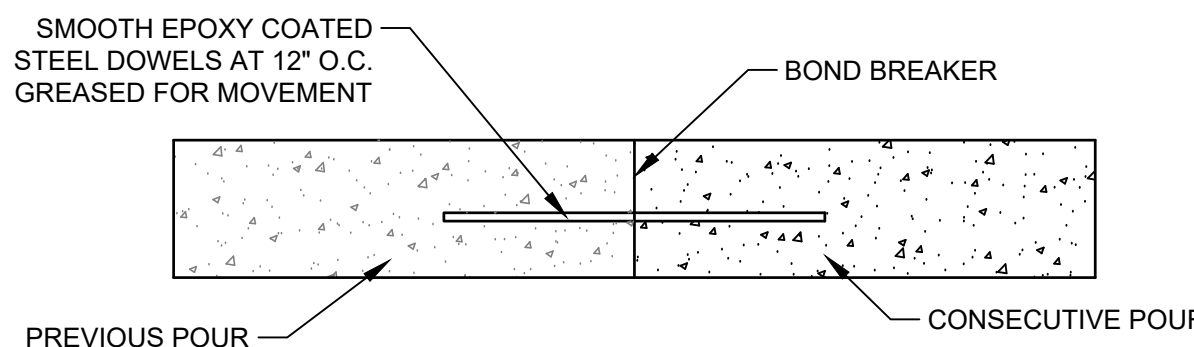
SECTION A-A



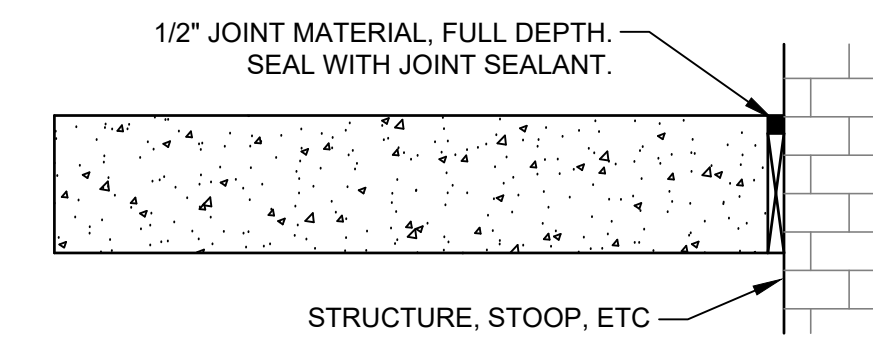
SECTION B-B



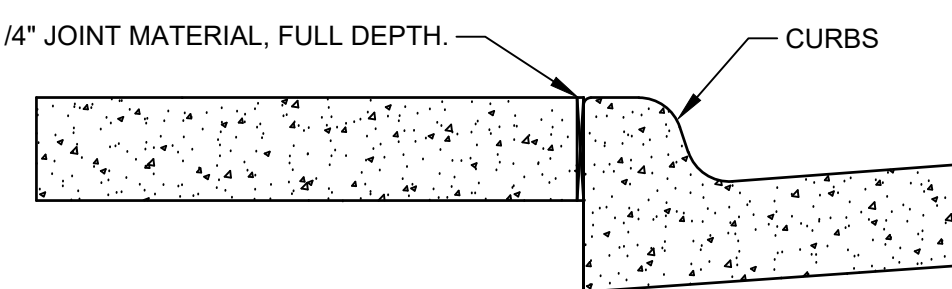
CONTRACTION JOINT



CONSTRUCTION JOINT



SEALED ISOLATION JOINT

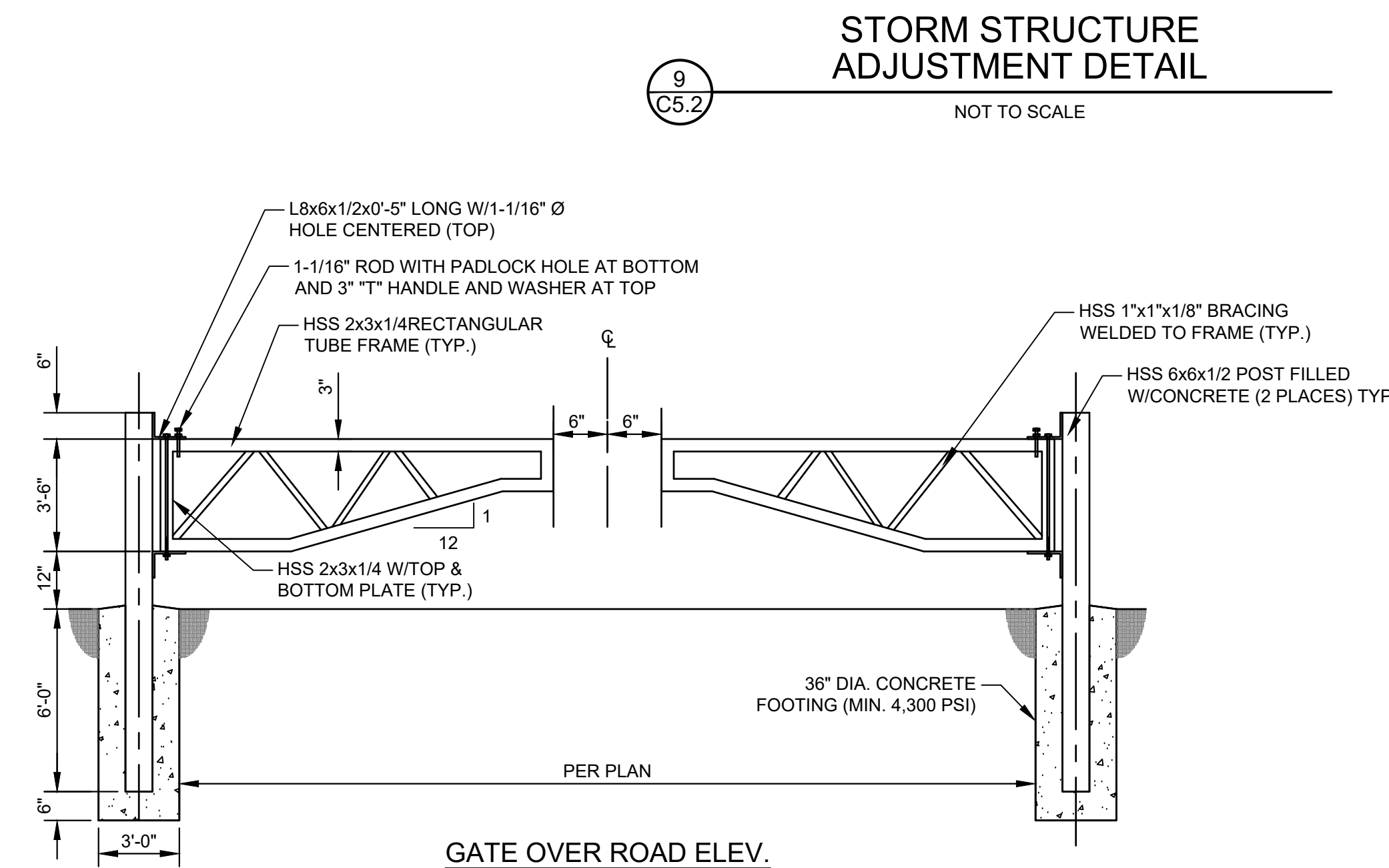


ISOLATION JOINT

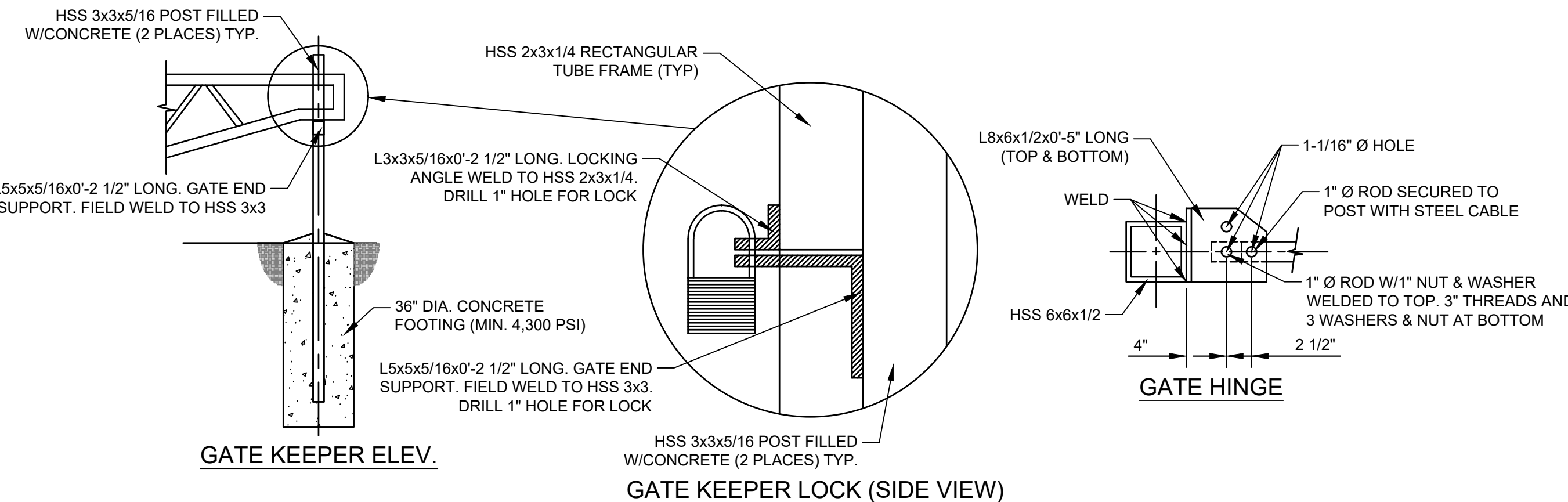
CONCRETE JOINT DETAILS

7
C5.2

NOT TO SCALE



GATE OVER ROAD ELEV.



GATE HINGE

GATE KEEPER LOCK (SIDE VIEW)

- NOTES:
- ADJUST HEIGHT AS NECESSARY TO EQUALIZE GRADE DIFF. EDGES.
 - PROVIDE SHOP DRAWINGS OF GATE, HINGE POST KEEPER.
 - GATE TO RECEIVE 2 COATS PRIMER, 2 COATS FINISH, COLOR TO BE BLACK, MATCHING OTHER GATES AT THE SITE.
 - ALL STEEL TUBING SHALL BE HOT FORMED MEETING ASTM A500, GRADE B (fy=46,000 psi)
 - ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 (fy=36,000 psi)

10
C5.2

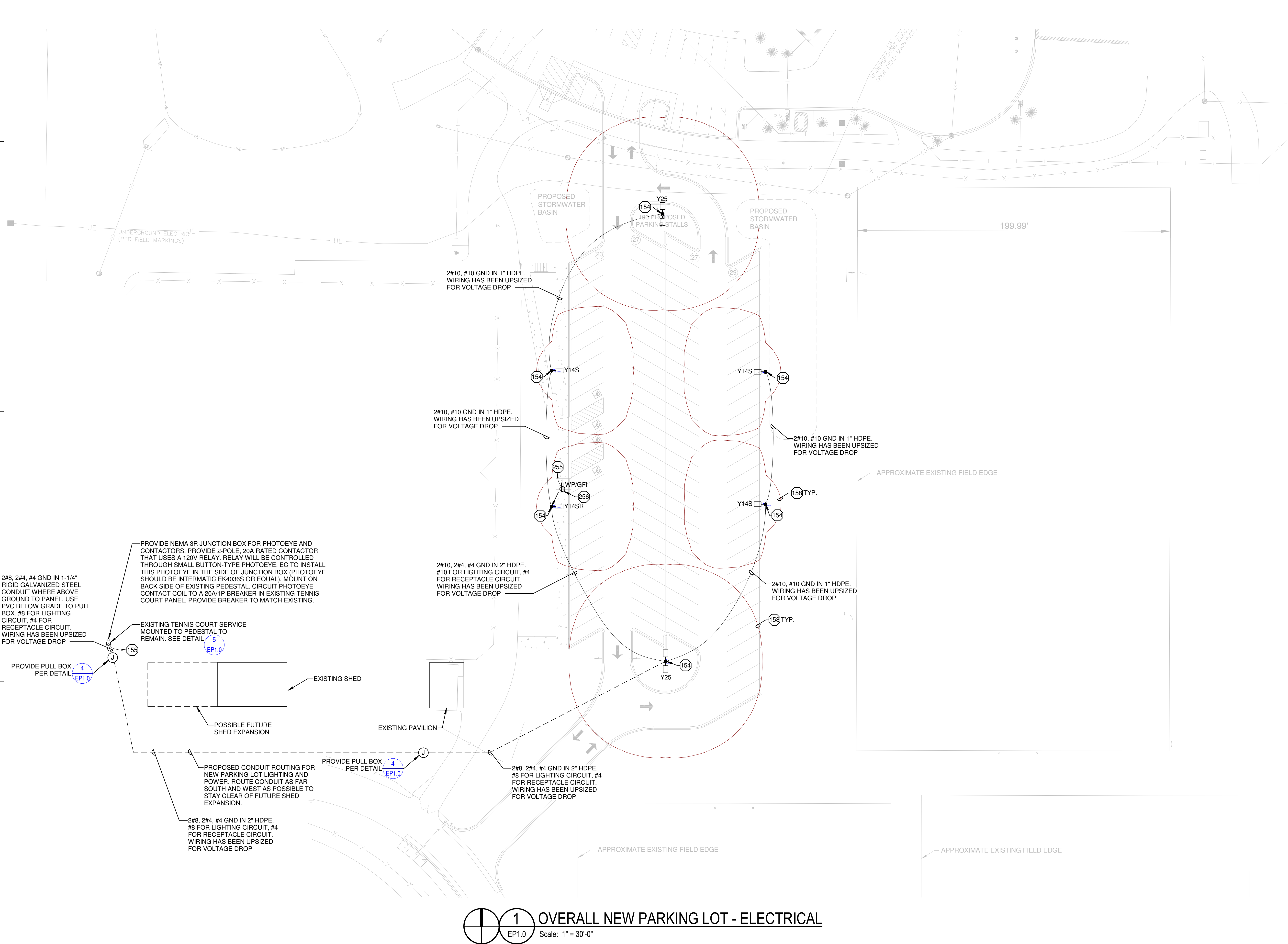
VEHICULAR TRAFFIC GATE

NOT TO SCALE

FIXTURE SCHEDULE							
TYPE	DESCRIPTION	WATTS	LAMP TYPE	LAMP QTY.	MANUFACTURER	CATALOG NUMBER	NOTE
Y14S	SINGLE HEADED TYPE IV LED (5000K) (1A) SHOE BOX FIXTURE WITH 22" SQUARE STEEL POLE, MUST BE IDA DARK SKY COMPLIANT	110	LED 5000K	WITH FIX	LITHONIA/UTM	RSX1 LED P3 50K R4S MVOLT SPA HS DDBXD / SSS-4-11-22-DM19AS-DDBXD	1
					GARDCO/HAPCO	OPF-S-A04-750-T4M-AR1-UNV-BZ/SSS-CB-4-11-22-D1-DT5-BZ	
					LSI	SSA LED 18L ACR FT UNV DIM 50 BRZ PM IHS / 4SQ B2 S11G22 S BRZ	
Y14SR	SINGLE HEADED TYPE IV LED (5000K) (1A) SHOE BOX FIXTURE WITH 22" SQUARE STEEL POLE, MUST BE IDA DARK SKY COMPLIANT WITH GFCI FESTOON RECEPTACLE 24" ABOVE BASE ON FRONT OF POLE	110	LED 5000K	WITH FIX	BEACON	VP-1-160L-115-5K7-4W-UNV-A-D8T-BC / SSSB25-40A-1-B3-D8T	1,2
					LITHONIA/UTM	RSX1 LED P3 50K R4S MVOLT SPA HS DDBXD / SSS-4-11-22-DM19AS-FDLGFC12C DDBXD	
					GARDCO/HAPCO	OPF-S-A04-750-T4M-AR1-FES-24" 0" -UNV-BZ/SSS-CB-4-11-22-D1-DT5-BZ	
Y25	DOUBLE HEADED TYPE V LED (5000K) (1A) SHOE BOX FIXTURE WITH 22" SQUARE STEEL POLE, MUST BE IDA DARK SKY COMPLIANT	146	LED 5000K	WITH FIX	BEACON	VP-1-160L-115-5K7-4W-UNV-A-D8T-BC / SSSB25-40A-1-B3-D8T	1
					LITHONIA/UTM	(2)RSX1 LED P2 50K R5 MVOLT SPA DDBXD / SSS-4-11-22-DM28AS-DDBXD	
					GARDCO/HAPCO	(2)OPF-S-A03-750-T5M-AR1-UNV-BZ/SSS-CB-4-11-22-D2-DT5-BZ	
					LSI	(2)SSA LED 12L ACR 5W UNV DIM 50 BRZ PM / 4SQ B2 S11G22 D180 BRZ	
					BEACON	(2)VP-1-160L-75-5K7-50W-UNV-A-D8T-BC / SSSB25-40A-2-B3-D8T	
GENERAL NOTES:							
1. ALL FIXTURES TO BE 208V.							
2. ALL FIXTURES SHALL BE DLC RATED FOR FOCUS ON ENERGY REBATE.							
PLAN NOTES:							
1. PROVIDE CONCRETE BASE FOR THIS FIXTURE.							
2. FESTOON OUTLET MOUNTED 24" ABOVE CONCRETE BASE PROVIDED WITH POLE. EC TO REPLACE PLASTIC COVER WITH DIECAST ALUMINUM COVER PER DETAIL 3/EP1.0							

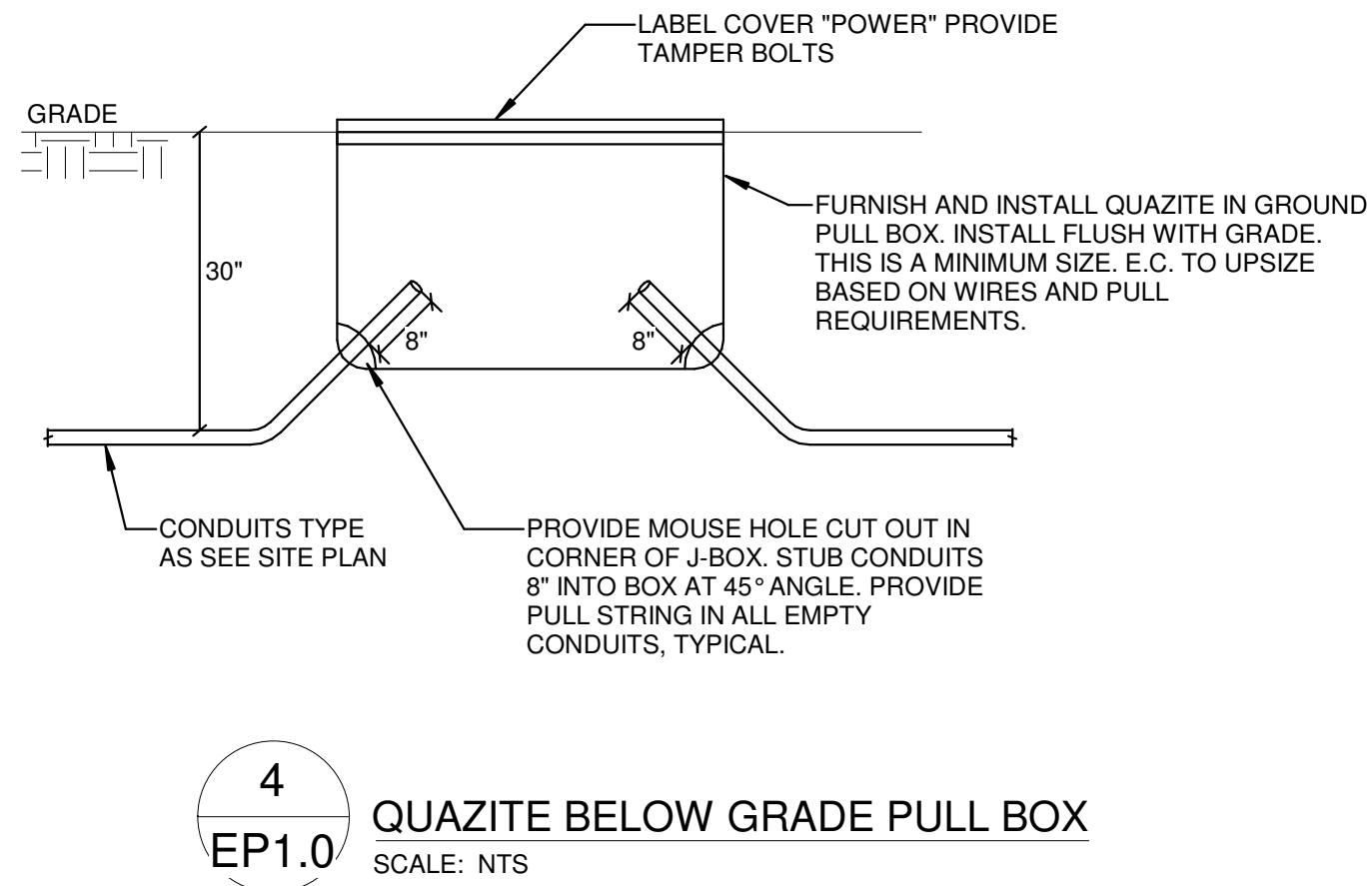


5
EP1.0
EXISTING TENNIS COURT SERVICE
SCALE: NTS

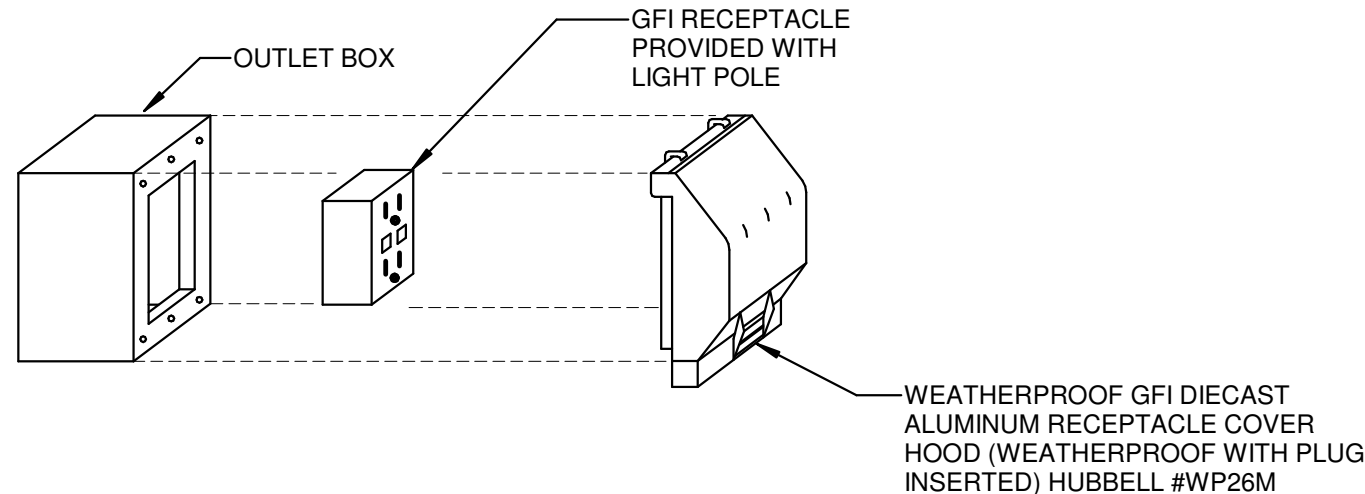


1
EP1.0
OVERALL NEW PARKING LOT - ELECTRICAL
Scale: 1" = 30'-0"

GENERAL NOTES	
1.	PROVIDE CONCRETE BASE ROUGH-IN PER DETAIL 2/EP1.0
2.	UNLESS SHOWN OTHERWISE, ALL CONDUITS BURIED 2'-6" BELOW FINISHED GRADE.
3.	INSTALL PULL CORD IN ALL EMPTY CONDUITS.
4.	E.C. IS RESPONSIBLE FOR ALL WORK REQUIRED TO BRING SITE EXCAVATION AND TOPPING BACK TO ORIGINAL CONDITION IF TRENCHING IS DONE ON COMPACTED SURFACES.
5.	VERIFY ALL EXISTING UNDERGROUND WITH EXISTING CONDITIONS. E.C. TO SITE SURVEY PRIOR TO WORK.
PLAN NOTES	
154	PROVIDE 36" CONCRETE BASE PER DETAIL 2/EP1.0
155	CIRCUIT TO A 20A/2P BREAKER IN EXISTING TENNIS COURT PANEL. PROVIDE BREAKER TO MATCH EXISTING. CONTROL THROUGH NEW PHOTOCELL ON PEDESTAL IN ENCLOSURE AS SHOWN.
156	TYPICAL LIGHT DISTRIBUTION OF 0.5 FOOT CANDLES. TYPICAL FOR ALL LIGHT FIXTURES OF THIS TYPE.
255	CIRCUIT TO A 20A/1P BREAKER IN EXISTING TENNIS COURT PANEL. PROVIDE BREAKER TO MATCH EXISTING. WIRE USING 2#4, #4 GND AS SHOWN ON PLAN. WIRING HAS BEEN UPSIZED FOR VOLTAGE DROP.
256	FESTOON OUTLET MOUNTED 24" ABOVE CONCRETE BASE PROVIDED WITH POLE. EC TO REPLACE PLASTIC COVER WITH DIECAST ALUMINUM COVER PER DETAIL 3/EP1.0



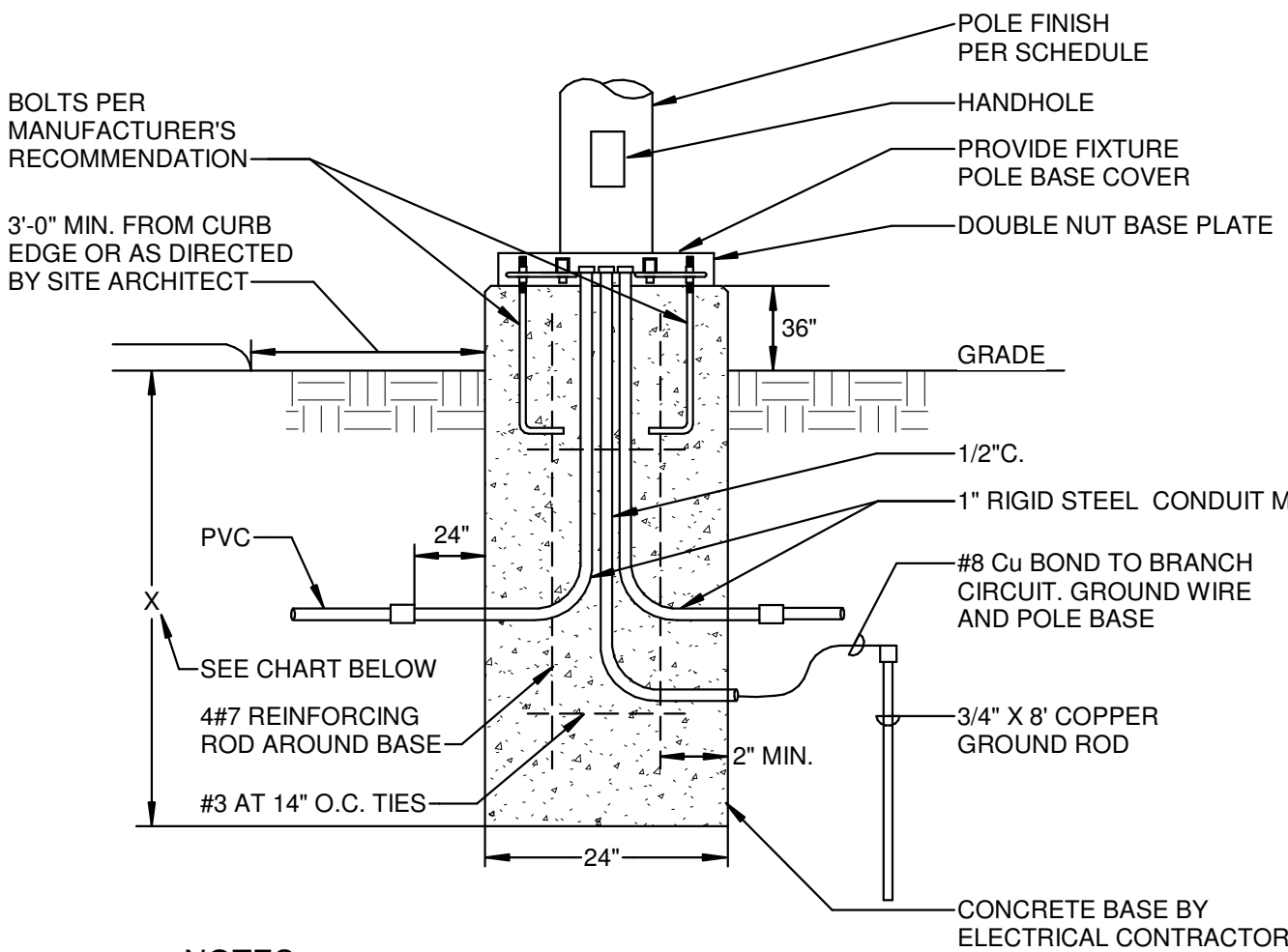
4
EP1.0
QUAZITE BELOW GRADE PULL BOX
SCALE: NTS



NOTE:
FOR ALL NEW CONSTRUCTION BOX IS TO BE FLUSH MOUNTED.

OUTLET BOX:
FLUSH: 3 1/2" DEEP 1-GANG MASONRY BOX SURFACE; F.S. BOX

3
EP1.0
GFI/WP RECEPTACLE MOUNTING DETAIL
SCALE: NTS



NOTES:
1. IN UNDISTURBED EARTH, EXCLUDING FILL MATERIAL, A 2'-0" DIA. HOLE WHICH SHALL BE USED AS THE FORM FOR THE CONCRETE BASE SHALL BE DRILLED.
2. IN EXCAVATED AREAS OR IN EXISTING SOIL CONTAINING FILL OF OBJECTIONABLE MATERIAL, BACKFILL AROUND CONCRETE BASE WITH COMPACTED GRANULAR BACKFILL A MIN. OF 2'-0" IN ALL DIRECTIONS.

POLE HEIGHT IN FEET	BASE DEPTH IN INCHES BELOW GRADE
10'-0"	X = 60" (INCHES)
15'-0"	X = 60" (INCHES)
20'-0"	X = 72" (INCHES)
25'-0"	X = 72" (INCHES)
30'-0"	X = 72" (INCHES)
35'-0"	X = 72" (INCHES)
40'-0"	X = 96" (INCHES)
45'-0"	X = 96" (INCHES)
50'-0"	X = 108" (INCHES)

2
EP1.0
36" EXTERIOR LIGHTING CONCRETE BASE DETAIL
SCALE: NTS

ELECTRICAL SPECIFICATIONS - DIVISION 26

1.1 ELECTRICAL CONTRACT REQUIREMENTS

- A. GENERAL
1. The Electrical Contractor shall be responsible for obtaining and paying for any and all permits (including closeout) required to complete this work. All costs shall be included in the bid.
2. Codes and Standards listed below, insofar as they apply, form a part of these Specifications, the same as if they were fully written and shall be followed as minimum requirements. Where standards conflict, that standard with the more stringent requirements shall be applicable. This shall not be construed as relieving the Contractor from providing the highest grade of material and Workmanship specified.
3. The Electrical Contractor shall give written notice to the Architect of any materials or apparatus believed in violation of low or ordinances, rules or regulations, or Authorities Having Jurisdiction.
4. All equipment shall comply with all applicable requirements of laws, codes, ordinances, legislation, etc., of all Federal, State, and Local Authorities, whether or not indicated on the Contract Documents.
5. The referenced codes shall include any and all supplements, addenda, memoranda, information bulletins and other changes and additions effective prior to the Date of Substantial Completion by adoption of local Authority Having Jurisdiction.
6. Modifications required by the Authorities Having Jurisdiction shall be made without additional charge to the Owner.
7. Where alterations to and/or deviations from the Contract Documents are required by the Authorities, report the requirements to the Architect and secure his approval before starting the alterations.
8. Where Contract Documents' requirements are in excess of Code requirements and are permitted under the Code, the Contract Documents shall govern.
9. All rules and regulations of the Underwriters Laboratories shall be complied with whether or not indicated in the Contract Documents. Provide Division 26 equipment having UL labels or labeled by an independent testing agency acceptable to the Authority Having Jurisdiction.
10. All work shall comply with the following codes and standards.
- a. Codes (Versions and amendments as adopted by Local Authorities):
- b. International Building Code
- c. National Electric Code
11. Standards:
- a. Underwriters Laboratories, Inc. (UL).
- b. American National Standards Institute (ANSI).
- c. National Electrical Manufacturers Association (NEMA).
- d. Illumination Engineering Society of North America (IESNA).
12. The Drawings show the general layout of the various items of equipment. However, layout of equipment, accessories, specialties, conduit, etc. are diagrammatic unless specifically dimensioned, and do not necessarily indicate every required fitting, junction box, pull box, relay or similar items required for a complete installation. Consult the Architectural Drawings and details for exact location of fixtures and equipment. Where same is not definitely located, obtain the information from the Architect before proceeding.
- B. WARRANTY
1. All equipment stated in this specification shall be warranted for a period of not less than 2 years from the date of commissioning against defects in material and workmanship.
2. The warranty shall be comprehensive. No deductibles shall be allowed for travel time, service hours, repair parts cost, etc.

7. Product specific standards and requirements are included in Product Specifications.

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. DESCRIPTION OF WORK

1. Furnish and install a complete and operable conduit/raceway system as indicated on the drawings and as specified herein.
2. All wire shall be in conduit.
3. Where conduit passes through areas of differing temperatures, such as into or out of cool-rooms, freezers, unheated and heated spaces, buildings, provide listed conduit seals to prevent the passage of moisture and water vapor through the conduit.

D. RACEWAY SYSTEMS

1. Conduit:
- a. Rigid conduit shall be steel, heavy wall, zinc coated in accordance with UL Standard. Use outdoor above grade or branch circuits and indoor feeders.
- b. Fittings for rigid conduit shall be steel-threaded type.
- c. Electrical metallic tubing shall be thin wall, zinc coated steel in accordance with UL standard. Use for general indoor lighting and power circuits.
- d. Fittings for electric metallic tubing shall be the steel, compression type.
- e. PVC conduit shall be schedule 40, NEMA specification TC-7, Federal Specification WC-10944 UL-651, with the exception of service entrance conduit and low voltage service conduit. Provide PVC conduit where stated on the drawings.
- f. Aluminum conduit in any form shall not be permitted.
- g. Minimum conduit size shall be 3/4 inch.
- h. Rigid steel conduit, intermediate metal conduit, and electrical metallic tubing shall be minimum 3/4-inch electrical trade size and shall be increased in size as required by the electrical codes to accommodate the wiring to be installed.
2. MC Cable:
- a. MC Cable shall not be used on this project.
3. HDPE Conduit
- a. Provide 1" and 2" smooth wall, orange colored HDPE conduit for the lighting circuits as shown on the plans. Provide Carlon (schedule 80) catalog #A5CSN1JNNA (1") and #A13CSN1JNNA (2") or equal. Provide submittal drawings for this equipment.

1.6 BOXES

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 - National Electric Code.
2. Conform to current National Electrical Manufacturers Association (NEMA) Standards.
3. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
4. Conform to National Electrical Contractors Association (NECA) "Standards of Installation".

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. GENERAL

1. Provide all junction and pull boxes that are required for the installation.

Type:

3. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.2 WIRE AND CABLE

A. APPLICABLE PUBLICATIONS

1. American National Standards Institute/National Fire Protection Agency (ANSI/NFPA), Specifications and Standards, current edition:
- a. NFPA 70 - National Electrical Code.
- b. ANSI/TIA/EIA-568-B.2.
2. National Electrical Contractors Association (NECA), Standard of Installation, current edition.
3. National Electrical Manufacturers Association (NEMA), Specifications and Standards, current edition.
4. Underwriters Laboratories, Inc. (UL).

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. GENERAL

1. All conductors shall be copper.
2. THWN or THHN general purpose building wire insulated with polyvinyl chloride (PVC) and covered with protective sheath of nylon intended for lighting and power circuits at 600 volts or less, in residential, commercial, and industrial buildings.
3. The wire shall be suitable for 90°C maximum continuous conductor temperature in dry locations and 75°C in wet locations and listed by Underwriters Laboratories for use in accordance with Article 310 of the National Electrical Code.

D. CONDUCTORS

1. Provide conductors with 600-volt insulation as indicated on the Drawings. All conductors indicated on the Drawings are copper and shall be in conduit.
2. Branch circuit conductors shall be a minimum No. 12 AWG unless otherwise noted; homeruns to panelboards shall be minimum No. 10 AWG when the length exceeds 75 feet.
3. Conductors No. 8 AWG and larger shall be stranded; No. 10 AWG and smaller shall be solid.
4. All conductors shall be color coded in accordance with the applicable electrical code requirement.
5. All conductors No. 8 AWG and smaller shall have continuously color-coded insulation.
- E. CONDUCTOR SIZING:
1. Conductor sizes are based on copper.
2. Use conductor not smaller than No. 12 AWG for power and lighting circuits.
3. Use No. 10 AWG conductors for 20 ampere, 120-volt branch circuits longer than 75 feet.
4. Use No. 10 AWG conductors for 20 ampere, 208-volt branch circuits longer than 200 feet.
5. Where circuit wiring length exceeds 100 feet, increase wire size as needed to maintain a maximum voltage drop of three percent.
6. Use conductor not smaller than No. 14 AWG for control circuits.
7. Wire and cable size shall be increased from size indicated or required by code to meet the following voltage drop requirements:
- a. 3% drop for branch circuits.

F. INSULATION

- a. Boxes exposed or concealed in walls or ceilings for use with rigid conduit or electric metallic tubing shall be the hot-dipped galvanized-steel type with required knock-outs for raceway terminations and shall be a minimum 4 inches square, 1-1/2 inches deep.
3. Dimensions of boxes shall be increased as required by applicable codes for the number of conductors accommodated.
4. All unused holes in boxes shall be plugged or capped with approved accessories.

D. INSTALLATION

1. Install junction boxes in accordance with the plans and sized in accordance with National Electrical Code.
2. Install no more than 270 degrees of conduit bends are exceeded between any two pull points.
3. Pull boxes in low voltage conduit runs shall also be installed to ensure no pull exceeds 100 linear feet in addition to the restricted number of bends totaling 180 degrees.

1.7 EXTERIOR LIGHTING CONTROLS

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 National Electrical Code.
2. Conform to current National Electrical Manufacturers Association (NEMA) Standards.
3. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
4. Conform to current NEMA Enclosure Standards.

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. DESCRIPTION OF WORK

1. Furnish and install a complete lighting control system as shown on the drawings and as specified herein. This equipment shall provide the following functions:
- a. Control of exterior lighting shall be done through a photo-eye (or LED fixtures) and mounted on the shed as shown on the drawings.

1.8 WIRING DEVICES

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of ANSI/NFPA 70 - National Electric Code.
2. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
3. Device specific standards and requirements are included in device specifications.

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. GENERAL

1. Devices shall be as indicated on the Drawings. The color of all devices shall be ivory. All receptacles including GFCI (120 volt) shall have a minimum 20-amp rating and be made of nylon or high impact resistant material. All receptacles shall be standard face shape and Tamper Resistant GFCI shall have standard GFCI face.
2. Plate Covers:

1. Branch circuit conductors up to and including No. 10 AWG shall have type THWN or THHN insulation; conductors larger than No. 10 AWG shall have THWN insulation.
2. Feeder conductors shall have type THW insulation.
3. All wire and feeder ampacities shall be limited to 75 C Table 310-16 of the NEC latest edition.

G. COLOR CODING

1. All conductors No. 8 AWG and smaller shall have continuously color-coded insulation as follows:
- a. 120/208-volt system
- b. Phase A: Black
- c. Phase B: Red
- d. Phase C: Blue
- e. Neutral: White
- f. Ground: Green
2. All conductors larger than No. 8 shall have color coded tape as described above installed on conductors at all equipment terminations and where conductor passes through pull boxes.
3. Neutral Coloring
- a. Provide color banding on neutrals to match phase coloring.

H. INSTALLATION

1. All conductors, including low voltage wiring for control and signal circuits, shall be installed on raceway unless specifically indicated or specified elsewhere.
2. Conductors shall not be installed in conduits, ducts, or raceways until the raceway system has been completed. When installing conduits, the electrical contractor shall exercise due care to prevent damage to the conductor or the insulation. Pull all conductors in the raceway at the same time.
3. All feeder cables shall be continuous from origin to panel or equipment termination without running splices in intermediate pull or splice boxes. Where taps and splices are necessary and approved, they shall be made in approved splice boxes with suitable connectors as herein specified.
4. Splices and taps for No. 6 AWG conductors and larger shall be the solderless, pressure type and shall be taped to the insulation value of the conductors. Conductors for No. 6 AWG to No. 1 AWG conductors shall be Burndy Company type "KS", and No. 2 AWG conductors and larger shall be Burndy Company type "KVS" or equals.
- I. CONNECTION
1. Connectors for conductors 8 AWG and larger shall be compression-type lugs, two-hole type lugs for #2/0 AWG and larger, and one-hole type lug for #1/0 AWG and smaller.
2. Lugs shall be no more than one AWG size larger or smaller in capacity than the conductor.
3. If incompatible mechanical lugs are installed in vendor-supplied equipment, they shall be replaced by vendor with high-compression type lugs, and equipment shall be approved for use with these lugs by "UL".
4. All connectors and apparatus, such as switchboards, panelboards, circuit breakers, etc., shall be equipped with UL-approved compression lugs for use with wire being furnished.

1.3 GROUNDING

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 - National Electric Code.
2. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
3. Conform to current Telecommunication Industry Association (TIA/EIA).

- a. Weatherproof receptacle plate shall be heavy duty type, cast aluminum with a deep cover hood to provide protection and shall be the hot-dipped galvanized-steel type with required knock-outs for raceway terminations and shall be a minimum 4 inches square, 1-1/2 inches deep.
3. Dimensions of boxes shall be increased as required by applicable codes for the number of conductors accommodated.
4. All unused holes in boxes shall be plugged or capped with approved accessories.

3. EXTERIOR LIGHT FIXTURES

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 - National Electric Code.
2. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
3. Conform to Wisconsin Administrative Code, SPS 363.
4. Conform to ACI recommendations.

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. GENERAL

1. Furnish and install complete and operable exterior lighting system as indicated on the drawings and as specified herein.
2. Supply and install all concrete fixture bases.
- D. FIXTURES AND COMPONENTS
1. Each bidder shall make his count of all fixtures of the type indicated on the fixture schedule and they shall be furnished as hereunder.
2. Basic catalog numbers only are given herein for fixtures. Provide auxiliary parts necessary for a complete installation.
3. Fixtures shall be furnished as required, for a full and complete installation, even though not specifically called out on plans.
4. Should any parts of the fixture be found to be bent or not in accord with their designed position, adjust, repair or replace at once the affected items required and subject to Architect's approval.
5. Provide all equipment, wiring and concrete pole bases.
6. Exterior pole installation shall include a pole base cover. This pole base cover shall be included and installed for all exterior lighting and poles whether or not specifically called for in the fixture schedule.
7. All exterior pole mounted lighting shall have fuses in each of the current carrying wires. Fuses shall be watertight fuse arrangement, Bus type HEB or equal.

E. FIXTURE BASES

1. Be responsible for furnishing and installation of all concrete bases. If not qualified in the installation of concrete bases, employ the services of a contractor who is qualified in the installation of concrete bases.
2. Refer to the drawings, plans and details for pole base locations and construction details.

F. FIXTURE LED MODULES

1. All fixtures that are LED will have LED modules included with the fixture.

G. INSTALLATION

1. General:
- a. The complete installation shall be done in a neat, workmanlike manner in accordance with all applicable codes and the manufacturer's recommendations.

4. Conform to National Electrical Contractors Association (NECA) "Standards of Installation".
5. Product specific standards and requirements are included in product specifications.
6. EIA/TIA-607.

B. SHOP DRAWINGS & O&M MANUALS

1. None

C. DESCRIPTION OF WORK

1. Furnish and install a complete and operable grounding and bonding system as indicated on drawings and specified herein.
2. Ground and bond all equipment required per all applicable codes whether or not specifically shown on drawings.

D. GROUND RODS

1. Material: Copper-clad steel, diameter: 3/4" minimum, length: 10' minimum. Rod shall be driven at least 10' 6" deep.
2. Use one or more ground rods to obtain the minimum specified ground resistance. This applies to manholes, padmount switches, transformers, service entrances, and all other equipment requiring a supplemental grounding electrode. Minimum of three ground rods shall be used to ground the service entrance as indicated on plans.

E. MECHANICAL CONNECTORS

1. The mechanical connector bodies shall be manufactured from high strength, high conductivity cast copper alloy material. Bolts, nuts, washers, and lockwashers shall be made of silicon bronze and supplied as a part of the connector body and shall be of the two bolt type.
2. Split bolt connector types are not allowed.
3. The connectors shall meet or exceed UL 467 and be clearly marked with the catalog number, conductor size and manufacturer.

F. EXOTHERMIC CONNECTIONS

1. Select the appropriate kit for specific types, sizes, and combinations of conductors and other items to be connected. Field personnel shall be trained in execution of welds.

G. WIRE

1. Material: Stranded copper (aluminum permitted only with aluminum conductors).
2. Grounding Electrode Conductor: Size as shown on drawings, specifications, or required by NFPA 70, whichever is larger.
3. Branch Circuit Equipment Ground: Size as shown on drawings, in specifications, or as required by NFPA 70, whichever is larger. Differentiate between the normal ground and the isolated ground when both are used on the same facility.

H. EXAMINATION

1. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

I. INSTALLATION

1. General:
- a. Provide a separate, insulated equipment grounding conductor in all raceways.
- b. Provide ground wire in all surface metal raceways, and wireways.
- c. Receptacle grounding:
- 1) For all receptacle circuits, provide separate green ground wire in raceway system.

- b. Install all fixtures, materials, assemblies and equipment in strict accordance with manufacturer's recommendations and instructions. Consult manufacturer for all wiring diagrams, schematics, sizes, outlets, etc. before installing.

2. Cleaning:

- a. Prior to turning the system over to the Owner, the system shall be physically cleaned.
- b. All appearance defects shall be carefully and professionally touched up so that the equipment is in "factory new" condition.
- c. At the completion of the work, remove from the building and the premises all rubbish and debris resulting from the work.

3. Fixture Bases:

- a. Bases shall be installed per ACI installation specifications. The following shall be adhered to:
- 1) For round bases, the base shall not be out of round more than 1", i.e. for a 24" base, maximum diameter 24.5", minimum diameter, 23.5".
- 2) Bases shall be vertically plumb within 1/2 bubble.
- 3) Fixture bases shall be in line with sidewalks, roadways, or building lines; whichever applies.
- 4) Bases shall be installed such that the center line over all the bases is not more than 1" beyond a site line of all the bases.
- 5) If there is a question as to the site line, it should be brought to the Architect's attention for determination.
- 6) Fixture base details generally indicate the height of the top of the base above finished grade.
- 7) Finished grade is established as the sidewalk or roadway that is being lighted using the exterior fixtures.
- 8) If there is a question as to what established grade height should be used, it should be brought to the Architect's attention for determination.
- b. For round bases where sonotube or similar cardboard form is used, strict adherence to the tube manufacturer's specifications shall be followed. These shall include, but are not limited to:
- 1) Tubes shall not be stored on their side.
- 2) Tubes must be protected from moisture at all times.
- 3) If any tube is found to be delaminated prior to the concrete pour, it shall be removed and replaced with a new tube.
- c. A releasing agent shall be sprayed on the sonotube prior to installation so that the tube can be easily removed from the concrete base.
- d. Sonotube shall be removed to below grade as soon as possible after concrete installation.
- e. Any excessive pockets in the concrete base shall be patched as per ASCI standard practice.
- f. Concrete base shall be rubbed to provide a smooth finish.
- g. The concrete shall be vibrated during installation to remove any air pockets.
- h. A rod shall be pushed down around the entire perimeter of the form to remove air pockets from forming between the sonotube and the concrete.

4. Exterior Light Pole:

- a. Unless specified otherwise, all equipment, wiring and concrete pole bases shall be provided.
- b. Concrete bases shall be installed as shown using a double nut anchor bolt system as follows:

- 2) Receptacles shall be isolated ground type where called for specifically on the drawing in other areas.
- 3) Standard receptacles may be used and green wire shall be directly connected to receptacle or to pigtail.
- 4) Provide #12 pigtail to ground all metal boxes.
- 5) Stranded wire twisted on ground terminal on device is not allowed.

1.4 SUPPORTING DEVICES

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 - National Electric Code.
2. Conform to current American National Standards Institute (ANSI) standards.
3. Conform to current American National Standards Institute ANSI B31.1 standards.
4. Conform to National Electrical Contractors Association (NECA) "Standards of Installation"

B. SHOP DRAWINGS & O&M MANUALS

1. Submit shop drawings and O&M Manuals for this equipment.

C. INSTALLATION

1. General:
- a. The complete installation shall be done in a neat, workmanlike manner in accordance with all applicable codes and the manufacturer's recommendations.
- b. Install all materials, assemblies and equipment in strict accordance with manufacturer's recommendations and instructions. Consult manufacturer for all wiring diagrams, schematics, sizes, outlets, etc. before installing.
2. Provide anchors, fasteners, and supports in accordance with NECA "Standard of Installation".
3. Do not fasten supports to other conduit.
4. Do not use powder actuated anchors.
5. Use steel metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.
6. Anchors:
- a. Install anchors at proper locations to prevent stresses from exceeding those permitted by ANSI B31 and transfer of loading and stresses to connected equipment.
- b. Installation methods shall be in conformity with manufacturer's recommendations for maximum holding power.
7. Conduit Supports:
- a. Support conduit as follows:
- 1) Vertical Surfaces: Galvanized, heavy-duty, sheet steel straps; back straps provided for exposed conduits.

1.5 RACEWAYS

A. APPLICABLE PUBLICATIONS

1. Conform to requirements of current ANSI/NFPA 70 - National Electric Code.
2. Conform to current National Electrical Manufacturers Association (NEMA) Standards.
3. Conform to current Underwriters Laboratories (UL) Specifications and Standards.
4. Conform to current Telecommunication Industry Association (TIA/EIA).
5. Conform to current American National Standards Institute (ANSI) standards.
6. Conform to National Electrical Contractors Association (NECA) "Standards of Installation".

- 1) After the concrete base is poured the first nut is installed on the anchor bolt and the pole base is set on this nut.
- 2) The second nut is placed on the top of the pole base plate.
- 3) The nuts are then used to properly level the pole.
- 4) Once the pole is leveled, the nuts shall be tightened and the void between the pole base and the concrete base shall be grouted.
- 5) This grouting shall include a drain gutter sloping away from the pole.
- 6) Exterior pole installation shall include a pole base cover.
- 7) A pole base cover shall be included and installed for all exterior lighting.

5. Exterior Lighting Circuitry:

- a. Exterior lighting is shown as being connected to a photo-eye control.

6. Start-Up and Testing:

- a. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

7. Final Testing:

- a. Operate each luminaire after installation.
- b. Confirm light controls properly operate intended fixtures.

1.10 SHOP DRAWINGS

A. Equipment Submittal Drawings:

1. Within 45 days after a notice to proceed and prior to ordering equipment, furnish to the Electrical Engineer submittal drawings for review.
2. Review of any submittal drawings does not waive any condition of the specifications unless specifically noted thereon.
3. No fabrication or ordering of equipment shall be started until reviewed drawings are returned.

B. Shop Drawing Submittal drawings in electronic PDF format for the following:

1. Wiring and cable
2. Grounding
3. Supporting devices
4. Raceways
5. Boxes
6. Photo-eye control
7. Wiring devices
8. Exterior Light fixtures & poles

1.11 PROJECT CLOSE-OUT

A. Provide the following for project close-out:

1. As-Built drawings
2. O&M manuals (2 copies) of what is stated in Shop Drawing Submittal stated in the paragraph above
3. Provide recorded owner training and turn over recorded file on a USB memory stick device.