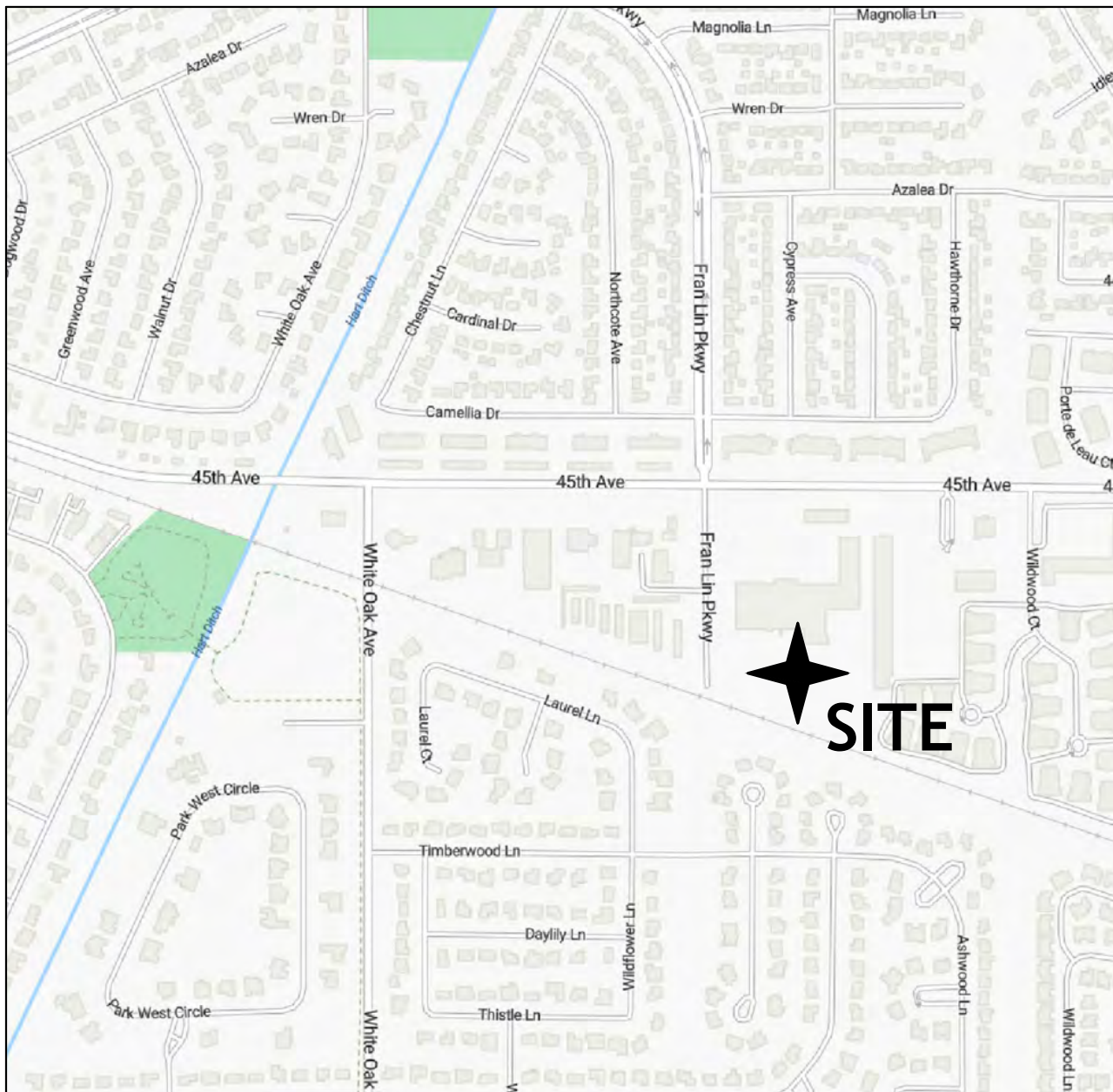


SITE DEVELOPMENT PLANS FOR:
Self Storage Facility
45th Ave & Fran-Lin Pkwy
Munster, IN 46321



LOCATION MAP



SITE CONTACTS

PLANNING/ PERMIT COORDINATOR		WATER	
AGENCY:	Town of Munster Community Development	AGENCY:	Town of Munster Public Works
ADDRESS:	1005 Ridge Rd Munster, IN 46321	ADDRESS:	1005 Ridge Rd Munster, IN 46321
PHONE:	219-836-6990	PHONE:	219-836-6900
CONTACT:	Sergio Mendoza	CONTACT:	
EMAIL:	smendoza@munster.org	EMAIL:	
LANDSCAPING		SEWER	
AGENCY:	Town of Munster Community Development	AGENCY:	Town of Munster Public Works
ADDRESS:	1005 Ridge Rd Munster, IN 46321	ADDRESS:	1005 Ridge Rd Munster, IN 46321
PHONE:	219-836-6990	PHONE:	219-836-6900
CONTACT:	Sergio Mendoza	CONTACT:	
EMAIL:	smendoza@munster.org	EMAIL:	
FIRE DISTRICT		TRANSPORTATION	
AGENCY:	Town of Munster Fire Department	AGENCY:	Town of Munster Public Works
ADDRESS:	550 Fisher St Munster, IN 46321	ADDRESS:	1005 Ridge Rd Munster, IN 46321
PHONE:	219-836-6960	PHONE:	219-836-6900
CONTACT:	Mark Hajduk	CONTACT:	
EMAIL:	mhajduk@munster.org	EMAIL:	
STORMWATER			
AGENCY:	Town of Munster Public Works		
ADDRESS:	1005 Ridge Rd Munster, IN 46321		
PHONE:	219-836-6900		
CONTACT:			
EMAIL:			
LAND DISTURBANCE - EROSION CONTROL			
AGENCY:	Town of Munster Public Works		
ADDRESS:	1005 Ridge Rd Munster, IN 46321		
PHONE:	219-836-6900		
CONTACT:			
EMAIL:			

SHEET INDEX

DESCRIPTION	DWG. NO.
CIVIL TITLE SHEET	C001
EXISTING CONDITIONS & DEMOLITION PLAN	C002
SITE PLAN	C101
GRADING & DRAINAGE PLAN	C201
SPOT ELEVATIONS PLAN	C202
DETENTION POND DETAILS	C203
EROSION CONTROL PLAN - PHASE 1	C211
EROSION CONTROL PLAN - PHASE 2	C212
EROSION CONTROL PLAN - PHASE 3	C213
SEDIMENT BASIN DETAILS	C214
UTILITY PLAN	C301
STORM DRAINAGE PROFILES	C401-C402
SITEWORK NOTES AND DETAILS	C501-C507
LANDSCAPE PLAN	LS-1 - LS-2

DEVELOPER

COMPANY: GHK Developments, Inc.
ADDRESS: 3920 Magazine St.
New Orleans, LA 70115
PHONE: 504-866-7300
CONTACT: Gordo Kolb
EMAIL:EMAIL: gordo@ghkinc.com

CIVIL ENGINEER

COMPANY: Bluewater Civil Design, PLLC
ADDRESS: 718 Lowndes Hill Rd
Greenville, SC 29607
PHONE: 864-326-4204
CONTACT: Jason S. Henderson, P.E.
EMAIL: jason@bluewatercivil.com

SURVEYOR

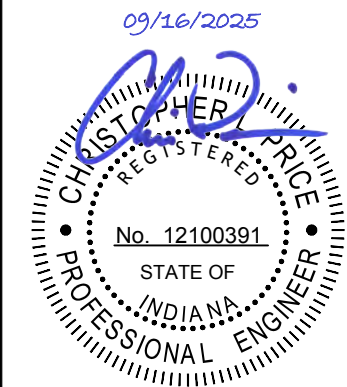
COMPANY: Torrenga Surveying, LLC
ADDRESS: 907 Ridge Rd
Munster, IN 46321
PHONE: 219-836-8918
CONTACT: J. Stuart Allen
EMAIL: stuart.allen@torrenga.com

ARCHITECT

COMPANY: Jared Ducote, Architect
ADDRESS: 125 W Romana Street, Suite 660
Pensacola, FL 32502
PHONE: 850-439-1552
CONTACT: Jared Ducote, AIA
EMAIL: jared@ducotedesign.com

I hereby certify that these plans (except for Architectural, Landscape) were prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Indiana and that I am consistent to prepare this document.

CHRISTOPHER L. PRICE - IN P.E. # 12100391 09/16/2025 DATE



PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
B	9-16-2025	ISSUED FOR PERMIT

SITE DATA

NAME OF DEVELOPMENT:	Self Storage Facility
NAME OF OWNER:	GHK Developments, Inc. 3920 Magazine St. New Orleans, LA 70115
NAME OF ENGINEER:	Bluewater Civil Design, LLC 718 Lowndes Hill Road Greenville, SC 29607 864-326-4204 Christopher L. Price chris@bluewatercivil.com
FEMA INFO:	FEMA FIRM Panel# 18089C0136F Zone: X Effective Date: 3/16/2016
ADDRESS:	45th Ave Munster, IN 46321
TMS:	45-07-32-126-001.000-027
ZONING:	Existing PUD to be amended
EXISTING LAND USE:	Vacant
TOTAL AREA:	11.35 AC
PROJECT AREA:	±3.3 AC
EXISTING IMPERVIOUS AREA:	±0.65 AC
PROPOSED IMPERVIOUS AREA:	±2.58 AC
EXISTING PARKING & PAVEMENT:	±0.65 AC
PROPOSED PARKING & PAVEMENT:	±2.58 AC
DISTURBED AREA:	±3.7 AC
PROPOSED BUILDING:	117,000 SF (2-story building) 62,638 SF Footprint
BUILDING SETBACKS:	Per existing PUD
PROPOSED PARKING:	20 (2 ADA) - INCL 6 PARKING SPACES INSIDE BUILDING. THIS PARKING TOTAL IS ADEQUATE TO CONDUCT BUSINESS OPERATIONS PER INTERNAL PARKING STUDY.
LOT COVERAGE REQUIRED:	70% MAX
LOT COVERAGE PROVIDED:	44%

LEGEND	
---	PROPERTY LINE
---	ADJOINER PROPERTY LINE
---	EASEMENT LINE
---	STREAM BANK
---	WETLAND BUFFER
---	LIMITS OF CONSTRUCTION/DISTURBANCE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	WATER MANHOLE
---	DRAINAGE MANHOLE (EXISTING)
---	DRAINAGE MANHOLE (PROPOSED)
---	CATCH BASIN (EXISTING)
---	CATCH BASIN (PROPOSED)
---	HEADWALL (PROPOSED)
---	FLARED END PIPE (PROPOSED)
---	STORM DRAINAGE PIPE (EXISTING)
---	STORM DRAINAGE PIPE (PROPOSED)
---	SANITARY SEWER LINE (EXISTING)
---	SANITARY SEWER LINE (PROPOSED)
---	SANITARY SEWER MANHOLE (EXISTING)
---	SANITARY SEWER MANHOLE (PROPOSED)
---	WATER LINE (EXISTING)
---	WATER LINE (PROPOSED)
---	GAS LINE (EXISTING)
---	GAS LINE (PROPOSED)
---	UNDERGROUND TELEPHONE
---	UNDERGROUND FIBER OPTIC LINE (EXISTING)
---	UNDERGROUND FIBER OPTIC LINE (PROPOSED)
---	UNDERGROUND ELECTRIC (EXISTING)
---	UNDERGROUND ELECTRIC (PROPOSED)
---	OVERHEAD POWER (EXISTING)
---	OVERHEAD POWER (PROPOSED)
---	WATER METER
---	HYDRANT (EXISTING)
---	HYDRANT (PROPOSED)
---	LIGHT POLE (EXISTING)
---	UTILITY POLE (EXISTING)
---	TRAFFIC SIGNAL POLE
---	SIGN
---	TELEPHONE PEDESTAL
---	TRAFFIC SIGNAL BOX
---	IRON PIN-REBAR FOUND

SITE PLAN INFORMATION

ARCHITECTURAL NOTE:
CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF BUILDING, SIDEWALKS ADJACENT TO BUILDING, COLUMN LOCATIONS, DOOR/ENTRY LOCATIONS, BOLLARDS, COMPACTORS, ELECTRICAL/MECHANICAL EQUIPMENT, TRUCK WELL, ROOF DRAIN DOWNSPOUTS, AND ALL UTILITY CONNECTIONS.

BUILDING FOOTING NOTE:
IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE BETWEEN THE CIVIL PLANS / ARCHITECTURAL PLANS / STRUCTURAL PLANS REGARDING THE GROUND ELEVATIONS DIRECTLY EXTERNAL OF THE BUILDING IN RELATION TO THE STRUCTURAL BUILDING FOOTINGS.

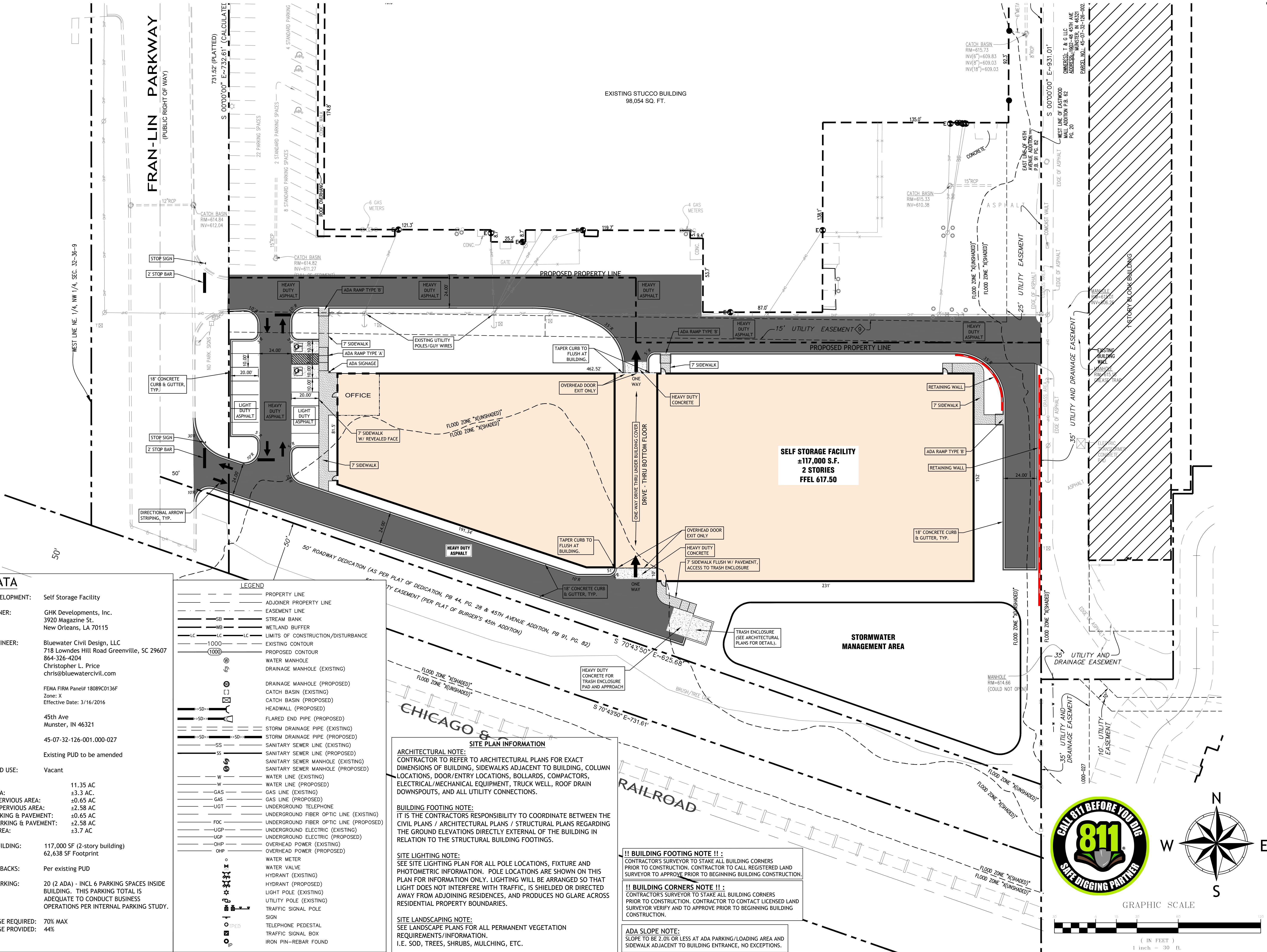
SITE LIGHTING NOTE:
SEE SITE LIGHTING PLAN FOR ALL POLE LOCATIONS, FIXTURE AND PHOTOMETRIC INFORMATION. POLE LOCATIONS ARE SHOWN ON THIS PLAN FOR INFORMATION ONLY. LIGHTING WILL BE ARRANGED SO THAT LIGHT DOES NOT INTERFERE WITH TRAFFIC, IS SHIELDED OR DIRECTED AWAY FROM ADJOINING RESIDENCES, AND PRODUCES NO GLARE ACROSS RESIDENTIAL PROPERTY BOUNDARIES.

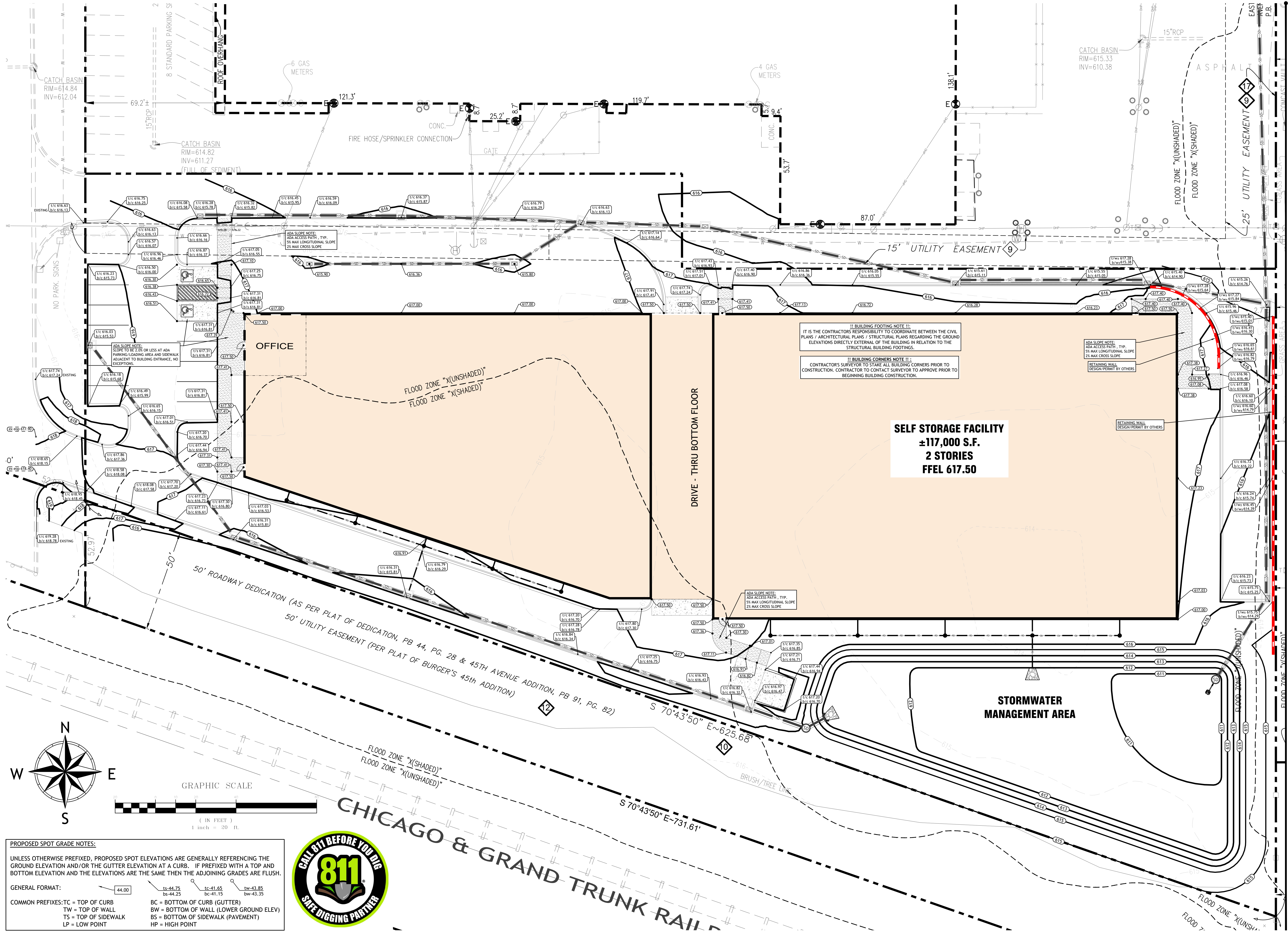
SITE LANDSCAPING NOTE:
SEE LANDSCAPE PLANS FOR ALL PERMANENT VEGETATION REQUIREMENTS/INFORMATION.
I.E. SOD, TREES, SHRUBS, MULCHING, ETC.

!! BUILDING FOOTING NOTE !! :
CONTRACTOR'S SURVEYOR TO STAKE ALL BUILDING CORNERS PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL REGISTERED LAND SURVEYOR TO APPROVE PRIOR TO BEGINNING BUILDING CONSTRUCTION.

!! BUILDING CORNERS NOTE !! :
CONTRACTOR'S SURVEYOR TO STAKE ALL BUILDING CORNERS PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT LICENSED LAND SURVEYOR VERIFY AND TO APPROVE PRIOR TO BEGINNING BUILDING CONSTRUCTION.

ADA SLOPE NOTE:
SLOPE TO BE 2.0% OR LESS AT ADA PARKING/LOADING AREA AND SIDEWALK ADJACENT TO BUILDING ENTRANCE, NO EXCEPTIONS.





PROPOSED SPOT GRADE NOTES:

UNLESS OTHERWISE PREFIXED, PROPOSED SPOT ELEVATIONS ARE GENERALLY REFERENCING THE GROUND ELEVATION AND/OR THE GUTTER ELEVATION AT A CURB. IF PREFIXED WITH A TOP AND BOTTOM ELEVATION AND THE ELEVATIONS ARE THE SAME THEN THE ADJOINING GRADES ARE FLUSH.

GENERAL FORMAT:

COMMON PREFIXES: TC = TOP OF CURB
BC = BOTTOM OF CURB (GUTTER)
TW = TOP OF WALL
BW = BOTTOM OF WALL (LOWER GROUND ELEV)
TS = TOP OF SIDEWALK
BS = BOTTOM OF SIDEWALK (PAVEMENT)
LP = LOW POINT
HP = HIGH POINT

44.00
ts-44.75
bs-44.25
tc-41.65
bc-41.15
tw-43.85
bw-43.35



Project Number: 2025-104
DWG Name: 2025-104 D1.dwg
Drawing Scale: AS NOTED
Date of Project: 8-1-2025
Engineer of Record:
Christopher L. Price, P.E.
South Carolina P.E. #2296
Indiana P.E. #12100391

bluewater
civil design
bluewater civil design, llc
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com

Certificates of Authorization:
SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

Self Storage Munster IN

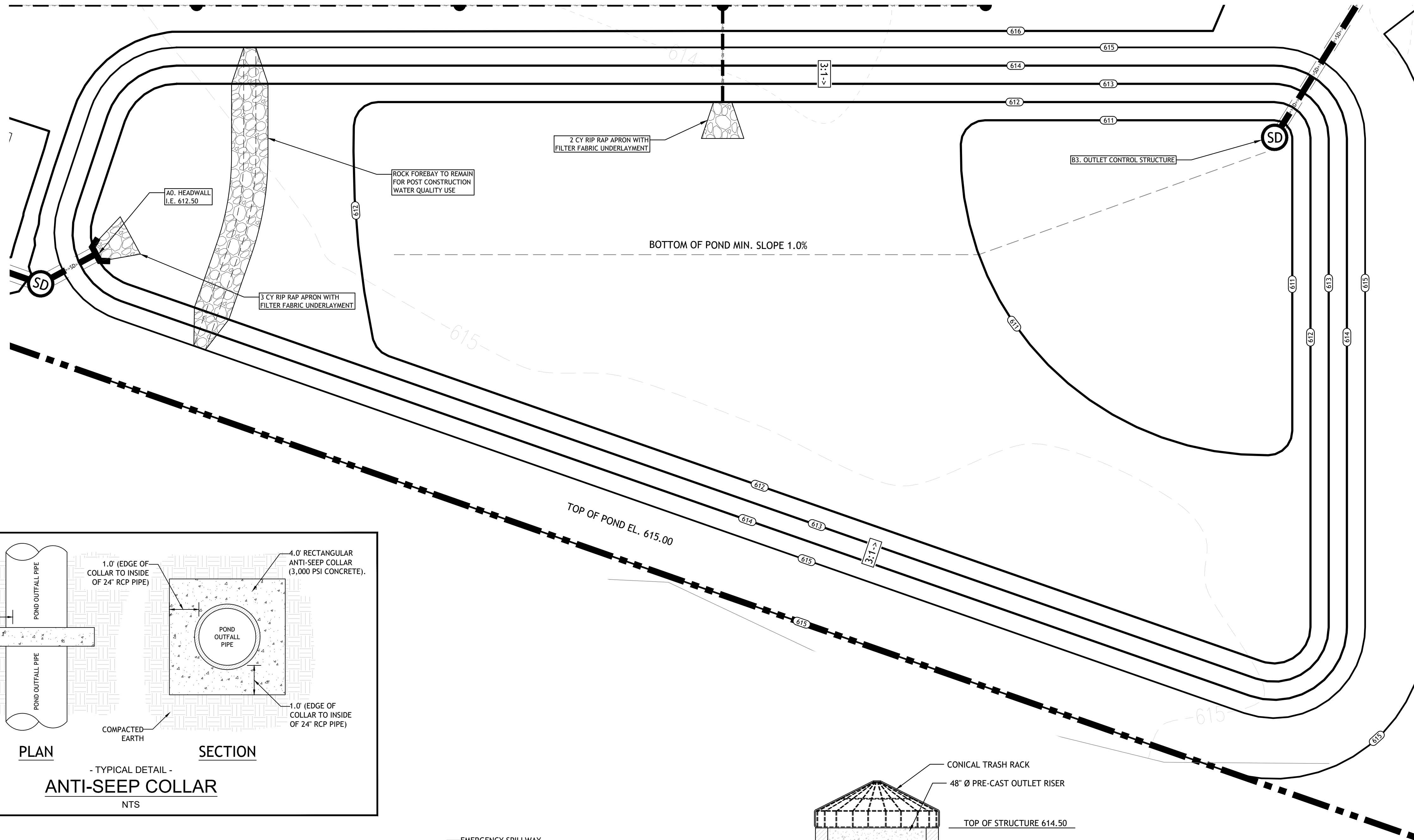
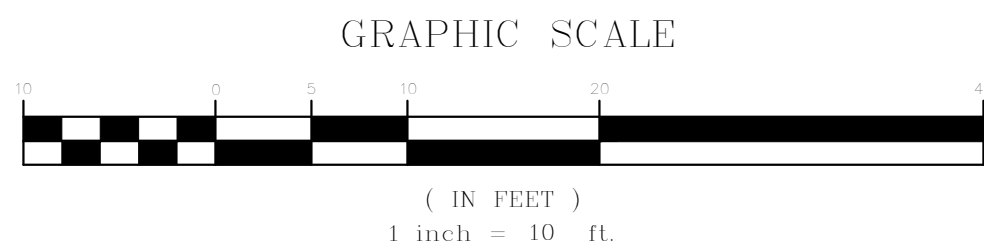
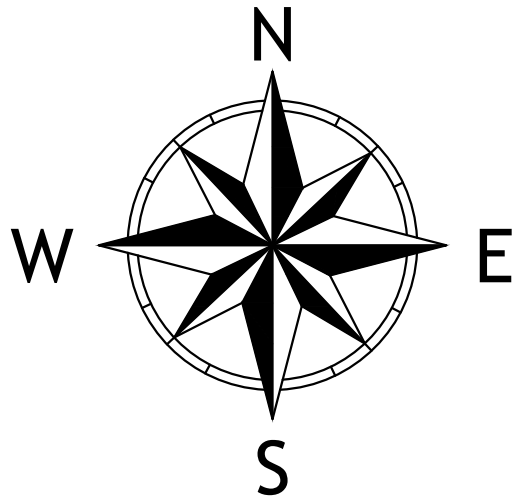
45th Street
Munster, IN 46321

09/16/2025
REGISTERED
No. 12100391
STATE OF INDIANA
PROFESSIONAL ENGINEER

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
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SPOT ELEVATION PLAN

C202



DISTURBANCE NOTE:
STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED.

SLOPE PROTECTION NOTE:
THE CONTRACTOR SHALL PROVIDE JUTE MATTING OR APPROVED EQUIVALENT ON ALL SLOPES 3:1 OR GREATER.

CONSTRUCTION TRAFFIC NOTE:
CONSTRUCTION TRAFFIC WILL BE USING STONE CONSTRUCTION ENTRANCES AND SHALL INSURE THAT THEY ARE NOT TRACKING SEDIMENT OFF-SITE. CONTRACTOR SHALL MONITOR AND CLEAN THE ROADWAY IF REQUIRED.

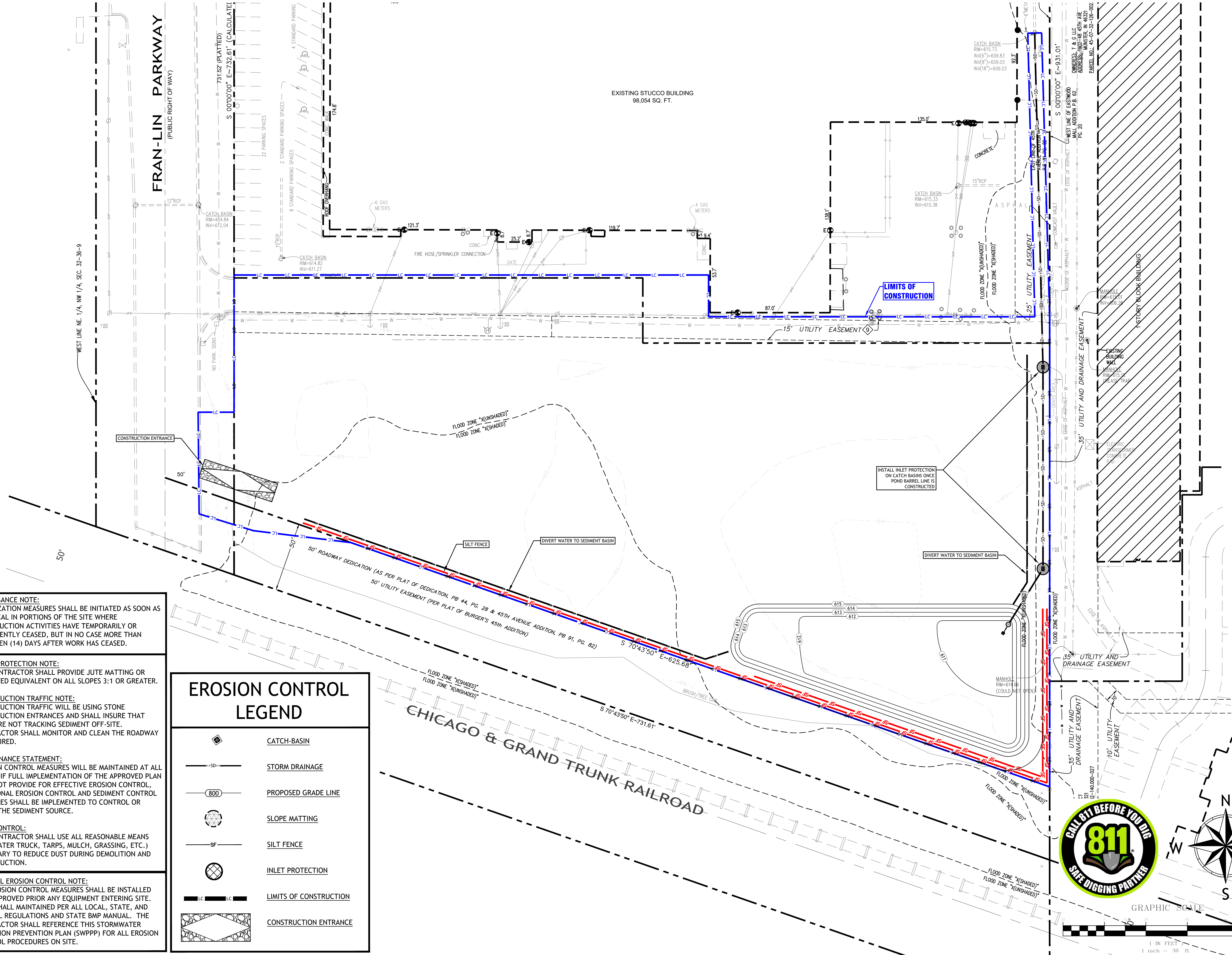
MAINTENANCE STATEMENT:
EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

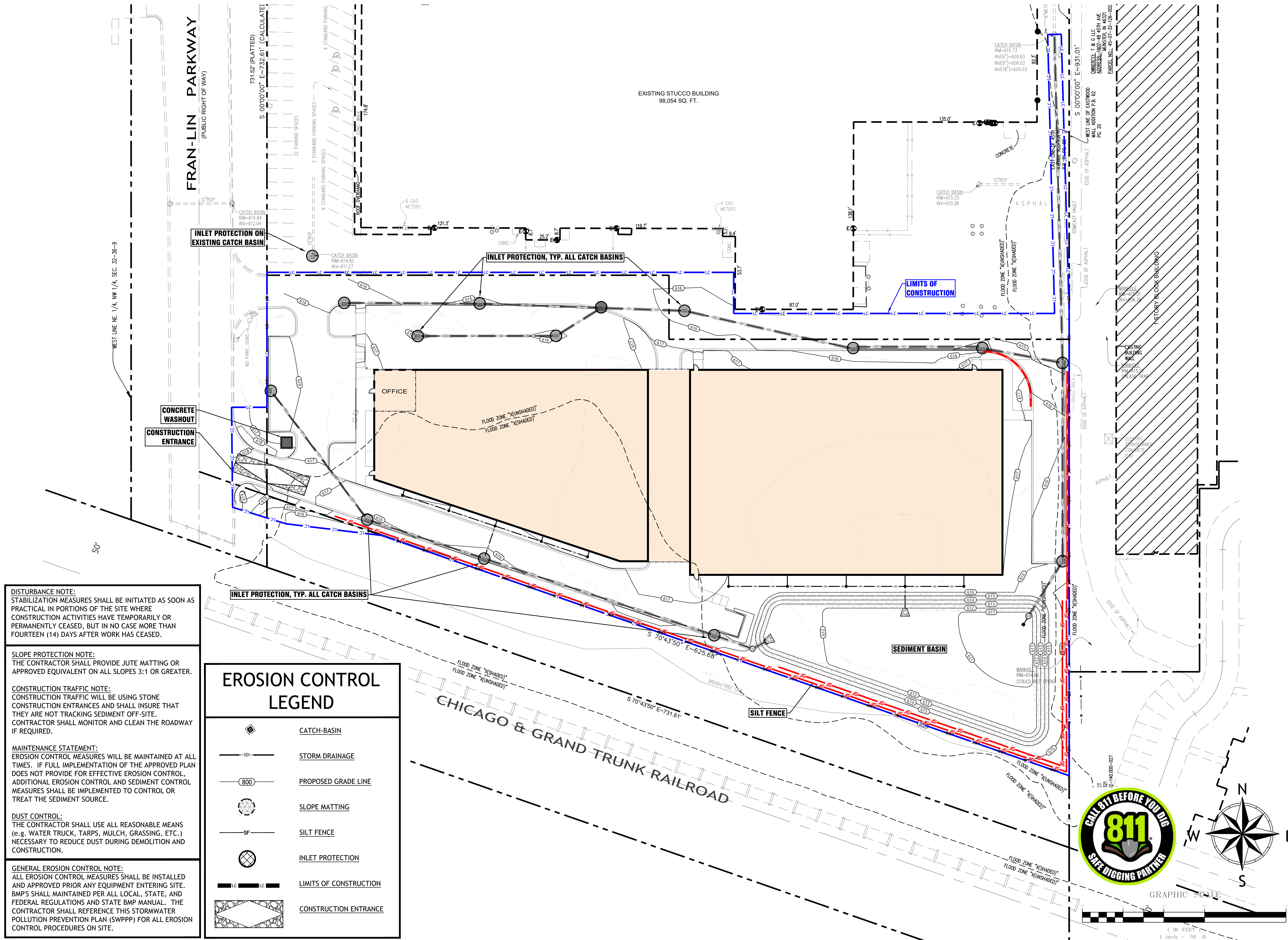
DUST CONTROL:
THE CONTRACTOR SHALL USE ALL REASONABLE MEANS (e.g. WATER TRUCK, TARPS, MULCH, GRASSING, ETC.) NECESSARY TO REDUCE DUST DURING DEMOLITION AND CONSTRUCTION.

GENERAL EROSION CONTROL NOTE:
ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND APPROVED PRIOR ANY EQUIPMENT ENTERING SITE. BMP'S SHALL MAINTAINED PER ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND STATE BMP MANUAL. THE CONTRACTOR SHALL REFERENCE THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ALL EROSION CONTROL PROCEDURES ON SITE.



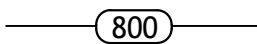





EROSION CONTROL LEGEND

	CATCH-BASIN
	STORM DRAINAGE
	PROPOSED GRADE LINE
	SLOPE MATTING
	SILT FENCE
	INLET PROTECTION
	LIMITS OF CONSTRUCTION
	CONSTRUCTION ENTRANCE





EROSION CONTROL LEGEND

	<u>CATCH-BASIN</u>
	<u>STORM DRAINAGE</u>
	<u>PROPOSED GRADE LINE</u>
	<u>SLOPE MATTING</u>
	<u>SILT FENCE</u>
	<u>INLET PROTECTION</u>
	<u>LIMITS OF CONSTRUCTION</u>
	<u>CONSTRUCTION ENTRANCE</u>

DISTURBANCE NOTE:
STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED.

SLOPE PROTECTION NOTE:
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CONSTRUCTION TRAFFIC NOTE:
CONSTRUCTION TRAFFIC WILL BE USING STONE CONSTRUCTION ENTRANCES AND SHALL INSURE THAT THEY ARE NOT TRACKING SEDIMENT OFF-SITE. CONTRACTOR SHALL MONITOR AND CLEAN THE ROADWAY IF REQUIRED.

MAINTENANCE STATEMENT:
EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

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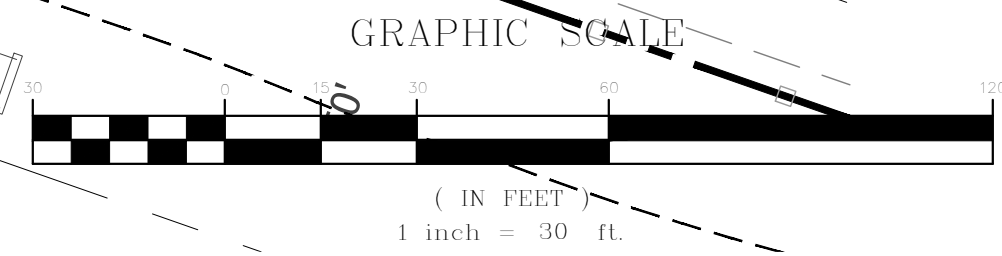
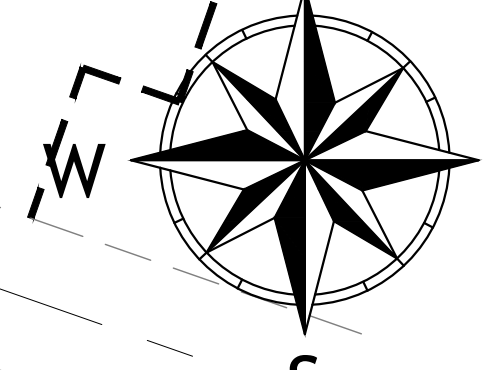
EROSION CONTROL LEGEND

- | | |
|--|------------------------|
| | CATCH-BASIN |
| | STORM DRAINAGE |
| | PROPOSED GRADE LINE |
| | SLOPE MATTING |
| | SILT FENCE |
| | INLET PROTECTION |
| | LIMITS OF CONSTRUCTION |
| | CONSTRUCTION ENTRANCE |

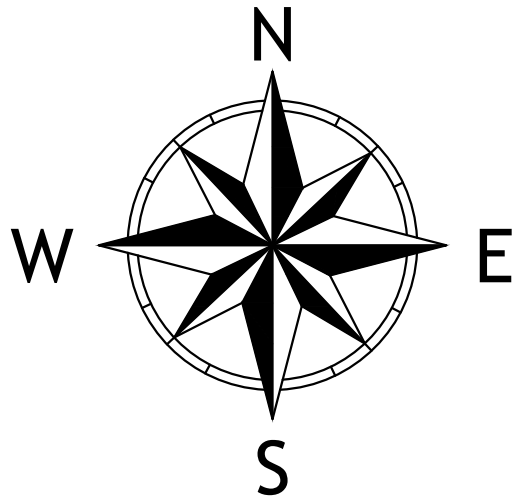
INLET PROTECTION, MAINTAIN UNTIL FINAL STABILIZATION

ONCE SITE IS FULLY STABILIZED, SEDIMENT BASIN TO BE CONVERTED TO PERMANENT POND CONFIGURATION (AS SHOWN THIS SHEET). SEE POND DETAIL ON SHEET C203 FOR PERMANENT POND CONDITION.

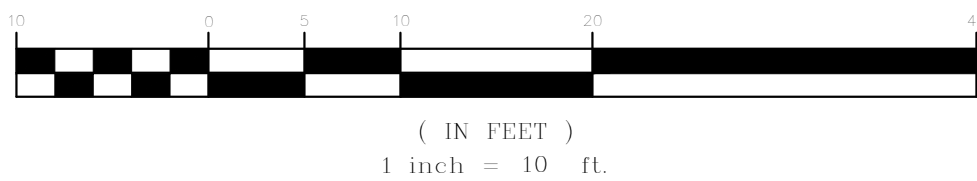
SILT FENCE, MAINTAIN UNTIL FINAL STABILIZATION



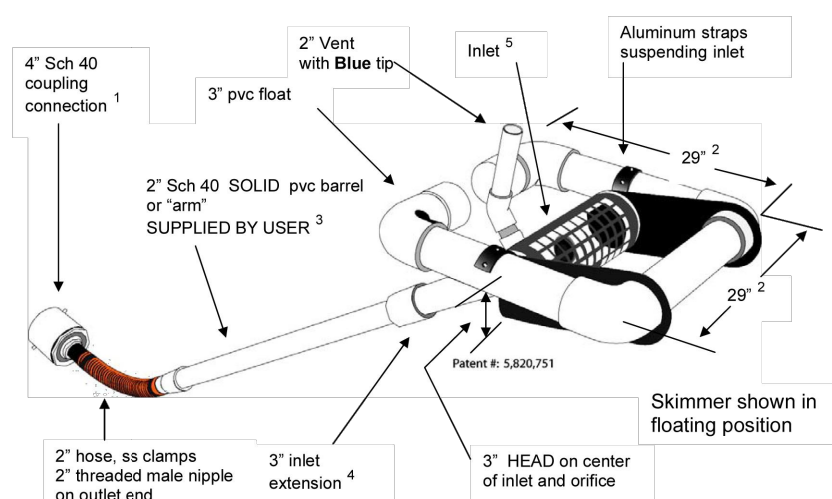
PLAN REVISION	ISSUE DATE	ISSUE COMMENT
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GRAPHIC SCALE



3" Faircloth Skimmer® Cut Sheet
J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com



1. Coupling can be removed and hose attached to outlet using the threaded 2" nipple. Typical methods used: on a metal structure a steel subout welded on the side at the bottom with a 2" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; grout a 4" pvc pipe in a hole in the concrete to connect the skimmer. It can be attached to a straight 4" sch 40 pipe through the dam but the pipe needs to be anchored to the bottom at the connection so it is secure.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 8' so the inlet can be pulled to the side for maintenance. If more than 10' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from a 3" maximum inlet to a 2" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 6" pipe between the straps with aluminum screen door for access to the 3" inlet and orifice inside.
6. Capacity: 9,774 cubic feet per day maximum with 3" inlet and 3" head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular basin volume and drawdown time required.
7. Shipped assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

3inchCut TM 11-07

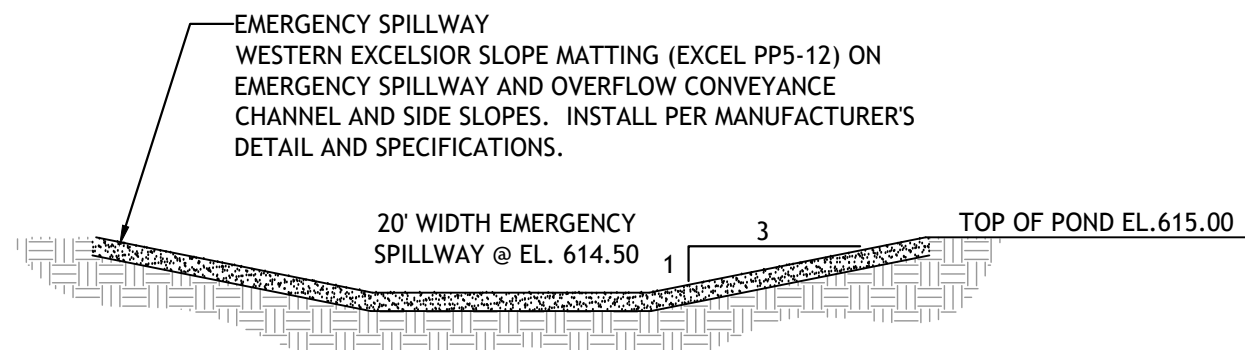
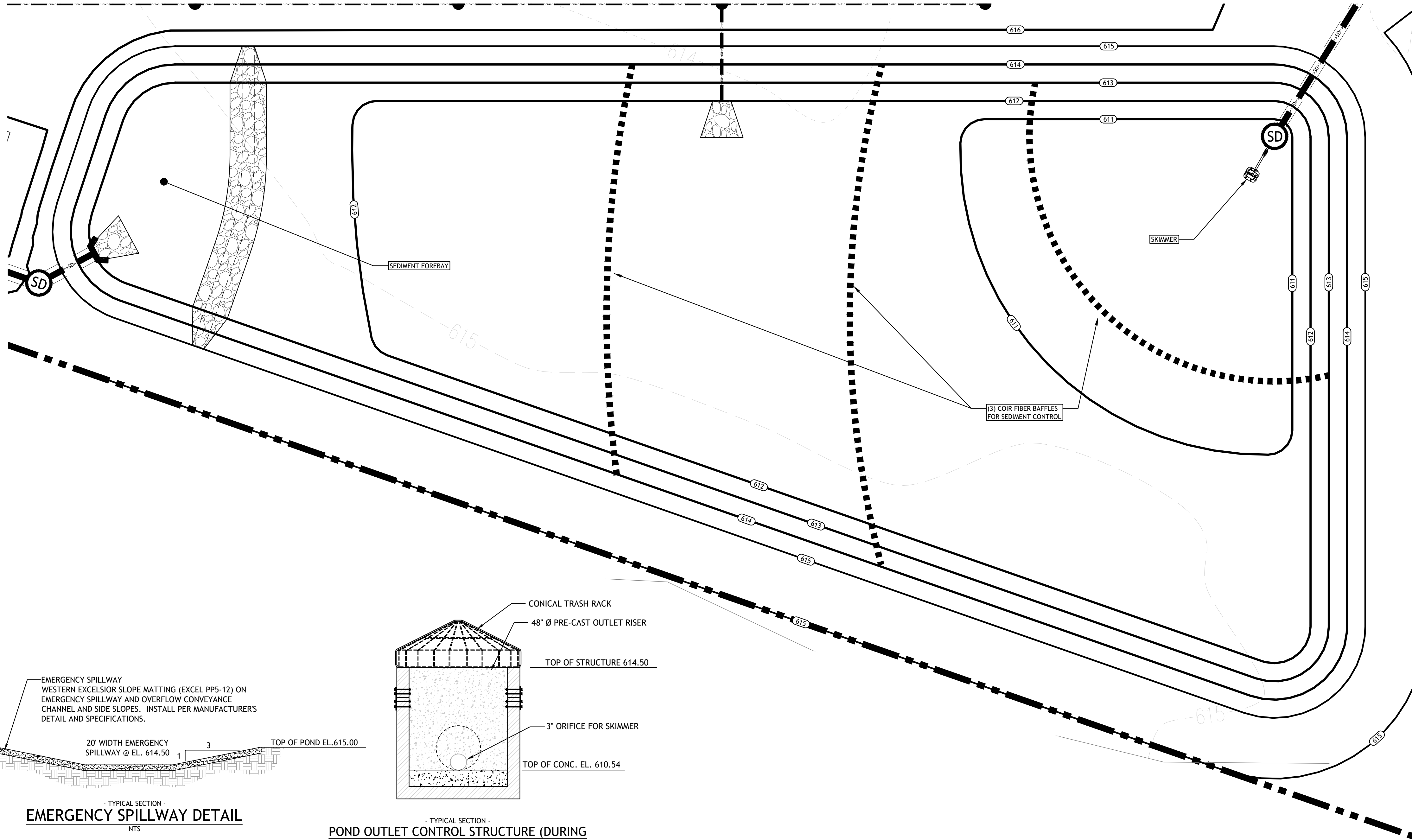
November 14, 2007

DRY SEDIMENT BASIN - GENERAL NOTES

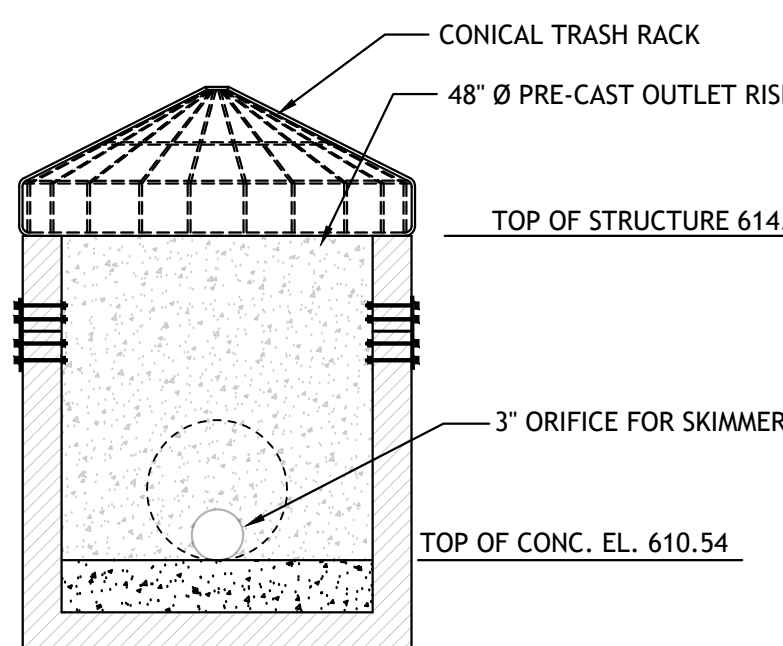
1. Sediment basins should not be placed in waters of the state or USGS blue-line streams (unless approved by Federal Authorities).
2. Sediment basin's side slopes shall be seeded and, when necessary, stabilized with vegetative or synthetic matting to prevent the formation of rills and gullies.
3. Install three (3) rows of porous baffles with a minimum spacing of 10 feet. Baffles should ultimately be placed to maximize the space between each row of baffles and the basin's inlets/outlets. Only two (2) rows of baffles are necessary for basins that are less than 50 feet in length.
4. Porous Baffles should be composed of coir-based materials or TRMs with a light penetration (open spaces) between 10-35%. These materials should not have loose straw. Silt Fence may not be used as Porous Baffles.
5. Each porous baffles shall be installed across the entire width of the basin and along the basin's side slope until the height of the baffle intersects the slope.
6. Install skimmer and coupling (as necessary) to riser structure at orifice along bottom of the principle spillway's riser structure. (refer to skimmer manufacturer for installation procedures and skimmer specifications.)
7. Skimmer should be equipped with a mechanism, such as a rope, to allow easy access to skimmer to unclogged orifice or perform other necessary maintenance.
8. Stormwater runoff entering the basin must be directed into proper BMPs to prevent erosion along side slopes and to prevent scour at the basin's inlets.
9. The forebay berm should consist of riprap, gabion, or an earthen berm with a rock filled outlet that is constructed across the bottom of the basin's width.
10. An additional cleanout stake for the forebay area is recommended and should be marked for cleanout at 50% of provided sediment storage.
11. The elevation of the emergency spillway should be at least 1 foot below the top of the embankment. The emergency spillway should not be located on fill material, when possible. Riprap and geotextile liner should be placed on all spillways that must be located on fill material.

DRY SEDIMENT BASIN - INSPECTION AND MAINTENANCE

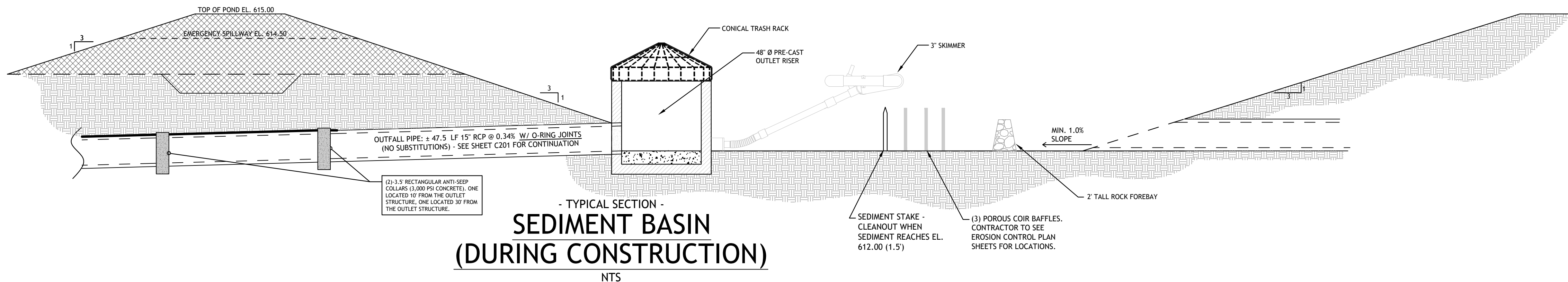
1. The key to a functional sediment basin is weekly inspections, routine maintenance, and regular sediment removal.
2. Attention to sediment accumulations within the basin is extremely important. Accumulated sediment deposition should be continually checked and removed when necessary.
3. Remove accumulated sediment when it reaches 50% of the design sediment storage volume or $\frac{1}{2}$ the height of the riser structure, whichever is reached first.
4. Removed sediment from the basin shall be placed in stockpile storage areas or spread thinly across the disturbed area. Stabilize the removed sediment after it is relocated.
5. Inspections of sediment basins should be conducted once every calendar week and, as recommended, within 24- hours of each rainfall event that produces 1/2-inch or more of precipitation.
6. All temporary sediment basins, which are not to be converted to a detention basin post-construction, should be removed within 30 days after final site stabilization is achieved.
7. Disturbed areas resulting from the removal of the sediment basin should be permanently stabilized and additional BMPs, such as silt fence, should be utilized to accept stormwater runoff from this disturbed area until final stabilization is reached.



- TYPICAL SECTION -
EMERGENCY SPILLWAY DETAIL
NTS



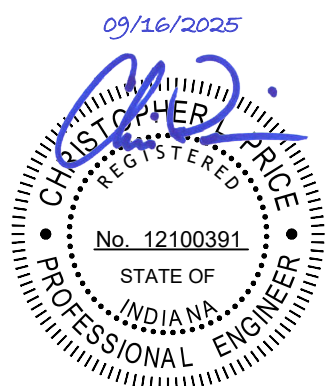
- TYPICAL SECTION -
POND OUTLET CONTROL STRUCTURE (DURING CONSTRUCTION FOR SEDIMENT CONTROL)
NTS



- TYPICAL SECTION -
SEDIMENT BASIN (DURING CONSTRUCTION)
NTS

Self Storage Munster IN

45th Street
Munster, IN 46321

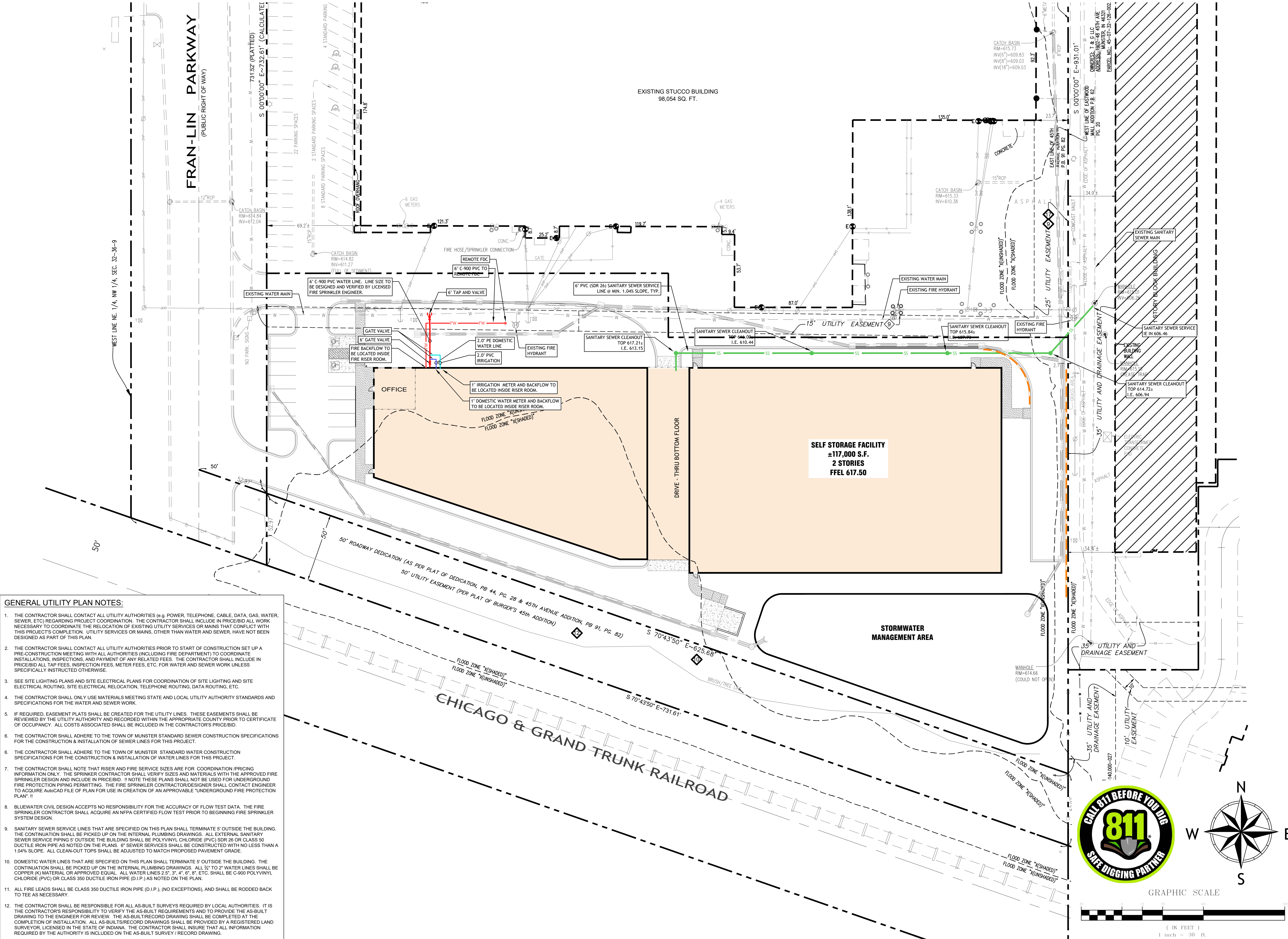


PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
B	9-16-2025	ISSUED FOR PERMIT

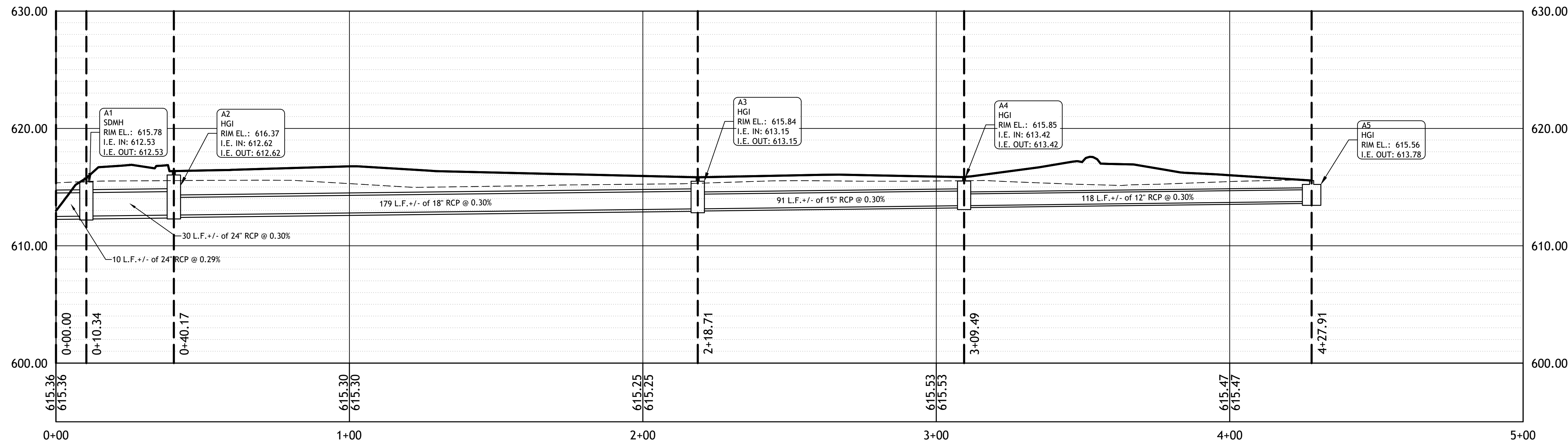
SEDIMENT BASIN
DETAILS

C214

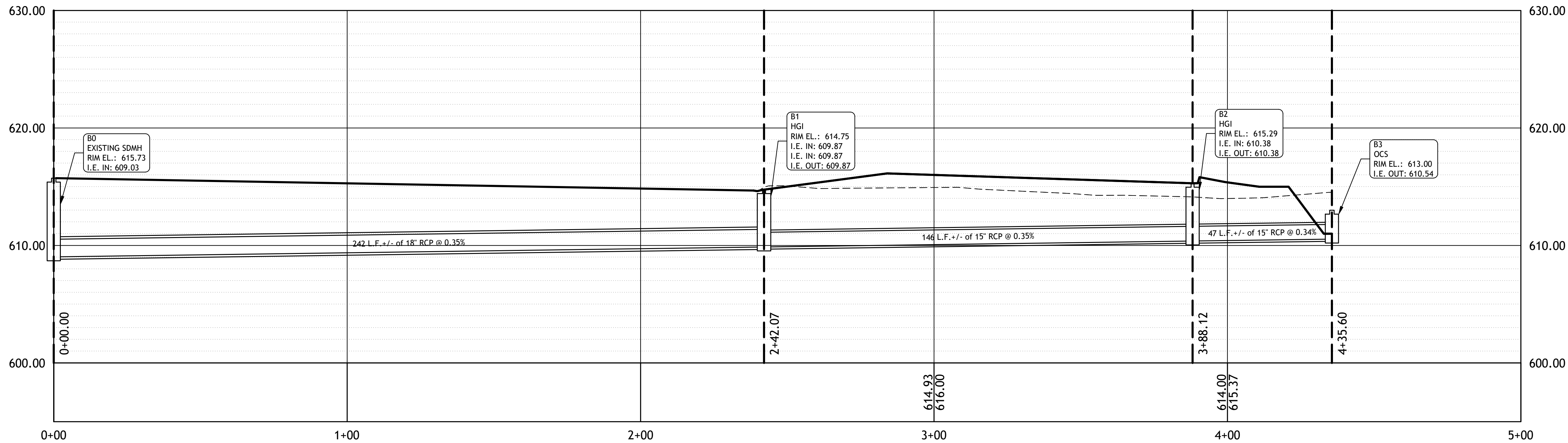
- GENERAL UTILITY PLAN NOTES:**
1. THE CONTRACTOR SHALL CONTACT ALL UTILITY AUTHORITIES (e.g. POWER, TELEPHONE, CABLE, DATA, GAS, WATER, SEWER, ETC) REGARDING PROJECT COORDINATION. THE CONTRACTOR SHALL INCLUDE IN PRICE/BID ALL WORK NECESSARY TO COORDINATE THE RELOCATION OF EXISTING UTILITY SERVICES OR MAINS THAT CONFLICT WITH THIS PROJECT'S COMPLETION. UTILITY SERVICES OR MAINS, OTHER THAN WATER AND SEWER, HAVE NOT BEEN DESIGNED AS PART OF THIS PLAN.
 2. THE CONTRACTOR SHALL CONTACT ALL UTILITY AUTHORITIES PRIOR TO START OF CONSTRUCTION SET UP A PRE-CONSTRUCTION MEETING WITH ALL AUTHORITIES (INCLUDING FIRE DEPARTMENT) TO COORDINATE INSTALLATIONS, INSPECTIONS, AND PAYMENT OF ANY RELATED FEES. THE CONTRACTOR SHALL INCLUDE IN PRICE/BID ALL TAP FEES, INSPECTION FEES, METER FEES, ETC. FOR WATER AND SEWER WORK UNLESS SPECIFICALLY INSTRUCTED OTHERWISE.
 3. SEE SITE LIGHTING PLANS AND SITE ELECTRICAL PLANS FOR COORDINATION OF SITE LIGHTING AND SITE ELECTRICAL ROUTING, SITE ELECTRICAL RELOCATION, TELEPHONE ROUTING, DATA ROUTING, ETC.
 4. THE CONTRACTOR SHALL ONLY USE MATERIALS MEETING STATE AND LOCAL UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS FOR THE WATER AND SEWER WORK.
 5. IF REQUIRED, EASEMENT PLATS SHALL BE CREATED FOR THE UTILITY LINES. THESE EASEMENTS SHALL BE REVIEWED BY THE UTILITY AUTHORITY AND RECORDED WITHIN THE APPROPRIATE COUNTY PRIOR TO CERTIFICATE OF OCCUPANCY. ALL COSTS ASSOCIATED SHALL BE INCLUDED IN THE CONTRACTOR'S PRICE/BID.
 6. THE CONTRACTOR SHALL ADHERE TO THE TOWN OF MUNSTER STANDARD SEWER CONSTRUCTION SPECIFICATIONS FOR THE CONSTRUCTION & INSTALLATION OF SEWER LINES FOR THIS PROJECT.
 6. THE CONTRACTOR SHALL ADHERE TO THE TOWN OF MUNSTER STANDARD WATER CONSTRUCTION SPECIFICATIONS FOR THE CONSTRUCTION & INSTALLATION OF WATER LINES FOR THIS PROJECT.
 7. THE CONTRACTOR SHALL NOTE THAT RISER AND FIRE SERVICE SIZES ARE FOR COORDINATION /PRICING INFORMATION ONLY. THE SPRINKLER CONTRACTOR SHALL VERIFY SIZES AND MATERIALS WITH THE APPROVED FIRE SPRINKLER DESIGN AND INCLUDE IN PRICE/BID. IF NOTE THESE PLANS SHALL NOT BE USED FOR UNDERGROUND FIRE PROTECTION PIPING PERMITTING. THE FIRE SPRINKLER CONTRACTOR/DESIGNER SHALL CONTACT ENGINEER TO ACQUIRE AutoCAD FILE OF PLAN FOR USE IN CREATION OF AN APPROVABLE "UNDERGROUND FIRE PROTECTION PLAN".
 8. BLUEWATER CIVIL DESIGN ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF FLOW TEST DATA. THE FIRE SPRINKLER CONTRACTOR SHALL ACQUIRE AN NFPA CERTIFIED FLOW TEST PRIOR TO BEGINNING FIRE SPRINKLER SYSTEM DESIGN.
 9. SANITARY SEWER SERVICE LINES THAT ARE SPECIFIED ON THIS PLAN SHALL TERMINATE 5' OUTSIDE THE BUILDING. THE CONTINUATION SHALL BE PICKED UP ON THE INTERNAL PLUMBING DRAWINGS. ALL EXTERNAL SANITARY SEWER SERVICE PIPING 5' OUTSIDE THE BUILDING SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 OR CLASS 50 DUCTILE IRON PIPE AS NOTED ON THE PLANS. 6" SEWER SERVICES SHALL BE CONSTRUCTED WITH NO LESS THAN A 1.04% SLOPE. ALL CLEAN-OUT TOPS SHALL BE ADJUSTED TO MATCH PROPOSED PAVEMENT GRADE.
 10. DOMESTIC WATER LINES THAT ARE SPECIFIED ON THIS PLAN SHALL TERMINATE 5' OUTSIDE THE BUILDING. THE CONTINUATION SHALL BE PICKED UP ON THE INTERNAL PLUMBING DRAWINGS. ALL 3/4" TO 2" WATER LINES SHALL BE COPPER (K) MATERIAL OR APPROVED EQUAL. ALL WATER LINES 2.5", 3", 4", 6", 8", ETC. SHALL BE C-900 POLYVINYL CHLORIDE (PVC) OR CLASS 350 DUCTILE IRON PIPE (D.I.P.) AS NOTED ON THE PLAN.
 11. ALL FIRE LEADS SHALL BE CLASS 350 DUCTILE IRON PIPE (D.I.P.), (NO EXCEPTIONS), AND SHALL BE RODDED BACK TO TEE AS NECESSARY.
 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL AS-BUILT SURVEYS REQUIRED BY LOCAL AUTHORITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE AS-BUILT REQUIREMENTS AND TO PROVIDE THE AS-BUILT DRAWING TO THE ENGINEER FOR REVIEW. THE AS-BUILT/RECORD DRAWING SHALL BE COMPLETED AT THE COMPLETION OF INSTALLATION. ALL AS-BUILT/RECORD DRAWINGS SHALL BE PROVIDED BY A REGISTERED LAND SURVEYOR, LICENSED IN THE STATE OF INDIANA. THE CONTRACTOR SHALL INSURE THAT ALL INFORMATION REQUIRED BY THE AUTHORITY IS INCLUDED ON THE AS-BUILT SURVEY / RECORD DRAWING.



PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
B	9-16-2025	ISSUED FOR PERMIT

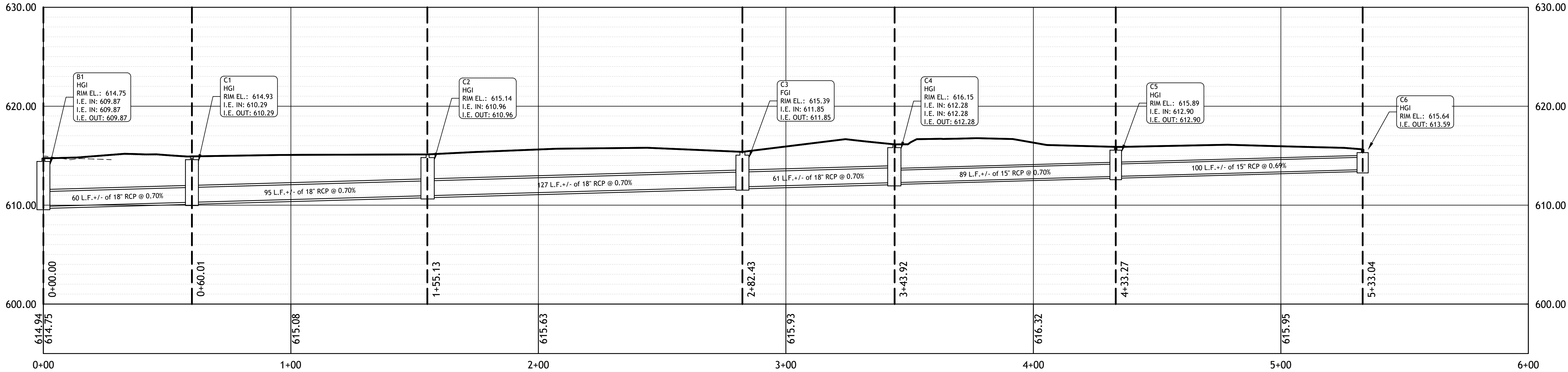


SD Profile A
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Vertical Scale: 1" = 5'

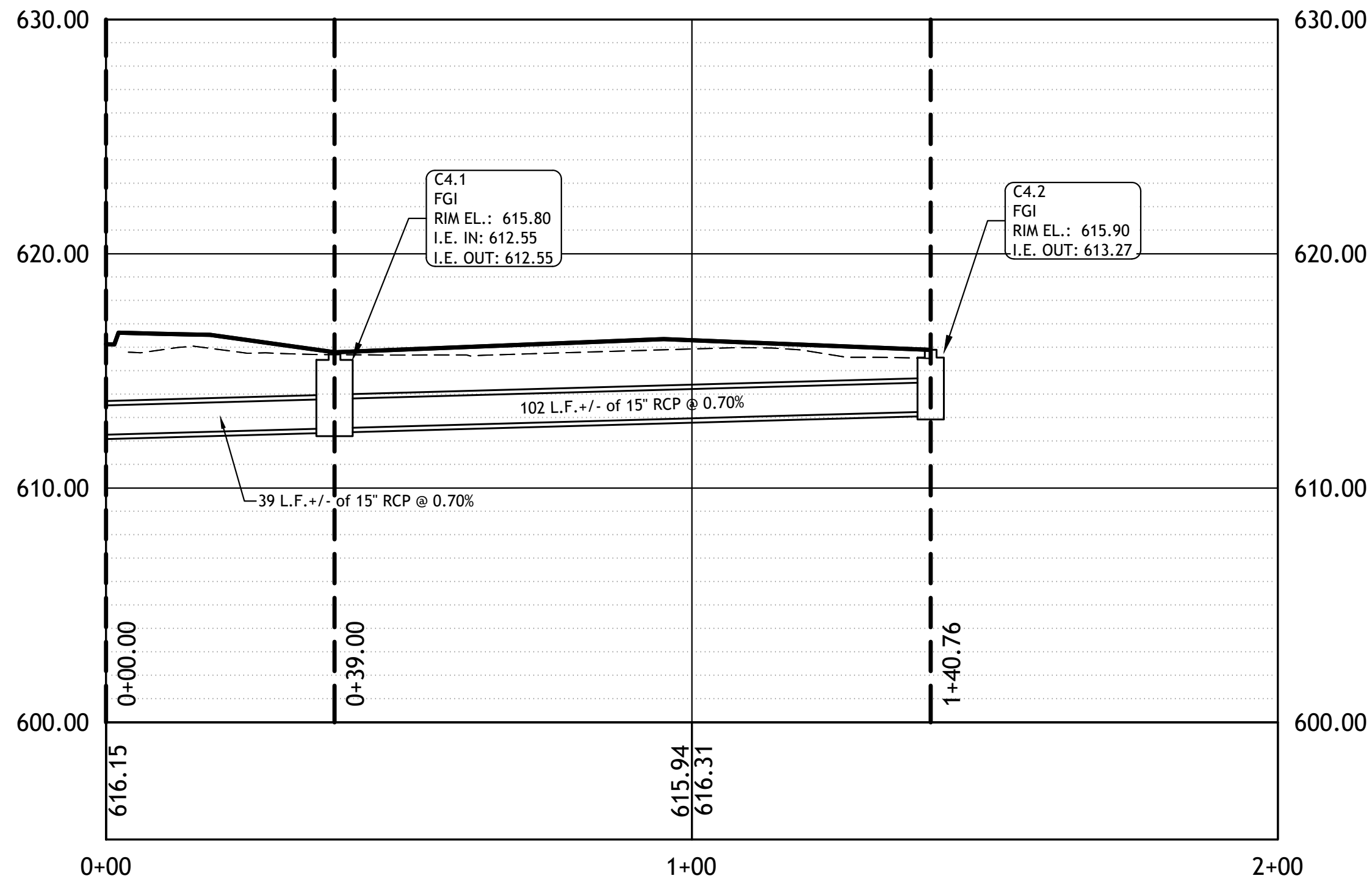


SD Profile B
Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 5'

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
B	9-16-2025	ISSUED FOR PERMIT



SD Profile C
Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 5'



SD Profile C4
Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 5'

Project Number: 2025-104
DWG Name: utility 2025-104.dwg
Drawing Scale: AS NOTED
Date of Project: 8-1-2025
Engineer of Record:
Christopher L. Price, P.E.
South Carolina P.E. #2236
Indiana P.E. # 12100391

blueWATER

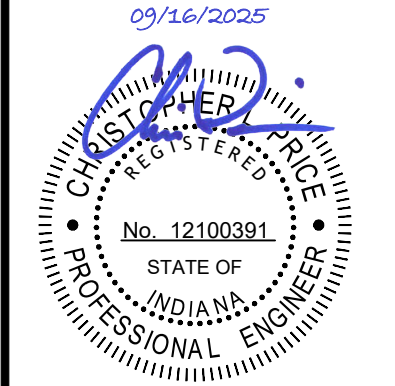
civil design

bluewater civil design, llc
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com

Certificates of Authorization:
SC CD4212 - GA PEF005865
NC P0868 - AL CA4065E

Self Storage Munster IN

45th Street
Munster, IN 46321



PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
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STORM DRAINAGE
PROFILES

C402

GENERAL NOTES FOR SITEWORK

1. The Contractor shall call 811 Utility Locate Service prior to start of any construction activity.
2. Survey:
- 2.1. Survey Information provided by **Torrenge Surveying (219-836-8918)**. The Contractor shall verify all benchmarks, easements, the location and invert elevation of all underground utilities within the construction area, verify property corners, and verify topography before any construction is begun.
- 2.2. The Contractor shall contact all utility companies prior to excavation to request a locate for all buried cables and underground utilities in the construction area or utilities that will be impacted by construction.
3. Permits:
- 3.1. The Contractor shall have copies of any necessary encroachment and construction permits prior to entering any right-of-way or beginning construction.
- 3.2. Permits typically required include but are not limited to: State NPDES Coverage, Local Issuing Authority Grading Permit, DOT Encroachment Permits (access and utility taps), State or Local Water Authority water extension permit, State or Local Sewer Authority sewer extension permit, Fire Marshall approval, and Local Municipality Zoning and Site Plan Approval.
- 3.3. The Contractor shall immediately notify the Owner's Representative when notices or verbal instructions are received from regulatory authorities, inspectors, or similar. The Contractor shall proceed with work associated with such notices or instructions once approved to do so by the Owner's Representative or as required by law.
4. Safety:
- 4.1. By Law, the Contractor shall comply with all OSHA regulations, including safety protocol, safety gear, safety education, etc.
- 4.2. The Contractor is exclusively responsible for the conditions of the site, including safety of all persons and property throughout the term of the project construction, 24 hrs per day/ 7 days per week.
- 4.3. The Engineer's review of the Contractor's work and performance will not include review of the Contractors safety programs. Such reviews are to be by OSHA inspectors and the Owner's Representative.
- 4.4. The Contractor is responsible for providing and maintaining all necessary traffic control devices during construction. Under no circumstances shall equipment be loaded or off-loaded on an open roadway. If such activity is required the Contractor shall coordinate shutting down the road with the appropriate DOT and utilize appropriate traffic control warning devices.
5. SWPPP:
- 5.1. The Contractor is responsible for reviewing the requirements in the SWPPP drawings and maintaining all records as required by Local, State, and Federal Laws.
- 5.2. The SWPPP manual/plans shall be kept on-site in a secure location accessible to the inspector at all times during construction.
- 5.3. The Contractor shall post a 24-Hour Contact and phone # and rain gauge at the job site.
6. Pre-construction Meeting:
- 6.1. The Contractor shall immediately contact the state or local issuing authority, utility companies, etc. and set up a pre-construction conference at the site.
- 6.2. The Contractor shall make sure the Engineer of Record, Owner, Inspector, Superintendent, and any relevant erosion control sub-contractor are in attendance.
- 6.3. The Contractor shall develop an attendance sign in sheet and keep minutes of the meeting with the SWPPP.
7. Tree Protection:
- 7.1. The Contractor shall protect trees that are noted to remain on the plans or as marked in the field by Owner's Representative. Trees that are to be protected shall have a protective fencing installed around the critical root zone (1' for every 1" DBH) and shall not disturb the root zone of such trees unless approved to do so in writing by the Owner's Representative.
- 7.2. The Contractor shall remove all trees and vegetation that interfere with new construction not noted to be protected. Remove debris from site or burn in accordance with local laws.
- 7.3. The Contractor shall be responsible for obtaining all necessary dumping or burning permits.
8. Earthwork:
- 8.1. The Contractor shall grade the site to the lines and grades shown and shall proof-roll and test compaction on all areas.
- 8.2. The Contractor shall retain the services of a testing company to test all areas to insure they meet the minimum compaction requirements as noted in these notes or as required by the Owner's Geotechnical Engineer's report.
- 8.3. The Grading Contractor shall proof-roll the construction area. All soft spots shall be undercut and re-compacted with suitable structural fill material and re-tested. Proof-rolling shall be observed by a qualified Geotechnical Engineer or Engineering Technician.
- 8.4. All proposed elevations shown are finish grade elevation and the Grading Contractor shall deduct quantities from the finished grades as required due to depth of pavement sections, sidewalks, turf areas with topsoil, building foundations, etc. to develop the true finished sub-grade.
- 8.5. Any topsoil in the construction area shall be stripped to a depth as required (see Geotechnical Report for referenced depths) and stockpiled as directed by the Owner's Representative. Topsoil shall be re-used on-site unless approved otherwise.
- 8.6. The contractor shall reference the Geotechnical Report for compaction requirements.
- 8.7. All excavation shall be "Classified Excavation". Excavation shall be "Classified" as "Common Excavation" or "Rock Excavation". Rock Excavation is removing material that has been observed by the testing company to only be removed by blasting or with an air hammer. Common Excavation is removing of materials by means of ripping and do not fall in the category of rock excavation as defined above (includes boulders, typical weathered rock, etc.)
- 8.8. The classification of soils include: topsoil, fill material, unsuitable material, and rock excavation. The classification of soils is the responsibility of the geotechnical soil testing firm.
- 8.9. Rock Excavation is classified as:
- 8.9.A. Massive rock excavation - Material of 1 c.y. or more unable to be excavated with a single tooth ripper drawn by a crawler tractor having a minimum draw bar rated at not less than 53,000 pounds (Caterpillar 9-8 or equivalent).
- 8.9.B. Trench excavation - Material of ½ c.y. or more which cannot be excavated with a power shovel having the capacity of at least that of a Caterpillar 225.
- 8.10. Fill material (including off site borrow) shall be from a source approved by the soil testing company and shall be free of roots, organics and boulders larger than 1 cubic foot. Fill shall be placed in 8" lifts and compacted as specified. The fill shall meet the specifications as required by the testing company or as indicated in the Geotechnical Report.
- 8.11. All existing pavement to be left in a fill area shall be scarified prior to placement of any fill material.
- 8.12. All slopes steeper than 4:1 receiving fill shall be plowed and scarified to enhance the bonding of new fill with existing surfaces.
- 8.13. The Grading Contractor shall include in contract price the total cost and unit price for all cut/fill necessary for earthwork balance including if necessary unit prices for hauling in material and hauling off material.
- 8.14. The wetting/drying of soils to achieve specified compaction shall be included in the Grading Contractor's contract price.
- 8.15. All private roads and parking lots shall have a minimum 5'-0" wide grassed shoulder with a maximum 2.0% cross slope. All public roads shall have a 6'-0" wide grassed shoulder with a maximum 2.0% cross slope.
- 8.16. Tolerances for final constructed grades shall be plus or minus 0.05 feet. The final graded surface under all building slabs shall be within a tolerance of 3/8" when measured with a 10' straight edge. All designated ADA accessible paths shall have a maximum 2.00% (1:50) cross-slope and maximum 5.00% (1:20) running slope, no exceptions. All designated ADA accessible parking spaces and landings (including 4' area out from all doorways) shall have a maximum 2.00% (1:50) slope in any direction, no exceptions. All designated ADA accessible ramps shall have a maximum slope of 8.33% (1:12), no exceptions.
9. Storm Drainage:
- 9.1. Reinforced Concrete Pipe (RCP) shall conform to ASTM C 76, latest edition. RCP with cover less than 15' and greater than 2' shall be CLASS III bell and spigot type and installed with flexible plastic (Bitumen) gaskets at all joints, unless otherwise noted. All other depths of cover shall be CLASS IV or V as noted. Gaskets shall comply with AASHTO M-198 T51, Type B, and shall be installed in strict accordance with pipe manufacturer's recommendations.
- 9.2. All corrugated plastic pipe shall meet the requirements of AASHTO M-294, Type 5, shall be smooth interior with annular corrugated exterior. HI-Q Sure-Lock 10.8 pipe, ADS, N-12, or approved equal. All joints shall be bell and spigot and shall meet the requirements of AASHTO M-294, shall be watertight, meeting the requirements of ASTM D 3212. The gaskets shall be made of Polyisoprene meeting the requirements of ASTM F 477. Installation shall conform to AASHTO M-294, ASTM D-2321, and manufacturers installation procedures. The maximum cover allowed over the top of CCP is 15'.
10. Utilities:
- 10.1. All water shall be per the approved drawing and the latest standards and specifications of the local water authority. The Contractor shall coordinate construction with the local water authority, including schedule B laydown areas. Any deviation from the approved plan shall be brought to the attention of the Engineer of Record and the appropriate inspector immediately. Deviations from the approved plan shall not be installed unless approved in writing by the local water authority.
- 10.2. Sanitary sewer lines and appurtenances shall be installed per the approved drawing and latest standards and specs of the local sewer authority.
- 10.3. The Contractor shall insure they have the proper approvals from the Town of Munster, prior to installation of any domestic water, fire water, or sanitary sewer system.
- 10.4. All utility trenches shall be thoroughly compacted as required by the local authority and tested to prevent settlement and damage to future pavement and structures.
- 10.5. The Contractor shall be responsible for relocating any existing utilities necessary for site construction, including all permits and fees. The Contractor is responsible for contacting all utility companies and including in his price all fees, charges, expenses, etc. in his cost to the Owner.
11. Pavement:
- 11.1. All paving work (materials and construction) shall comply with INDOT standards and specifications for Hot-mixed Asphalt Pavement. (See Pavement Section Details for depths of layers).
- 11.2. All pavement shall be installed on a finished and well-drained sub-grade compacted as specified in previous notes.
- 11.3. Base course material for asphalt pavement shall be stone aggregate base course (ABC) and compacted to 100% modified proctor.
- 11.4. Concrete pavement shall consist of a base course with stone aggregate base course compacted to 100% modified proctor. The concrete shall be poured with WWF. Concrete shall be broom finished and jointed as required.
- 11.5. Concrete curb and gutter ON-SITE AND OUTSIDE OF INDOT RIGHT OF WAY shall be per ON-SITE 18" Curb and Gutter.
- 11.6. Concrete curb and gutter WITHIN INDOT RIGHT OF WAY shall be INDOT STANDARD 30" wide with standard curb constructed with 4,000 PSI concrete and expansion joints and contraction joints installed to comply with state DOT standard specification for materials and construction of curb and gutter.
- 11.7. All parking lot striping shall be per State D.O.T. specifications with two (2) coats of paint applied. The bases of all light poles, all bollards, and the face of all sidewalks, are to be painted TRAFFIC YELLOW. The Contractor is responsible for providing fire lane striping and signage meeting all locking requirements. Parking lot striping shall be reflective paint (see site plan for color). Stop bars, directional arrows, and parcel pickup are to be reflective paint (see site plan for color). All ADA striping shall be reflective ADA blue.
12. Erosion Control and Drainage:
- 12.1. All areas outside paving limits and building foundations shall have a minimum 4" layer of topsoil added and permanently grassed in accordance with state seeding specifications or landscaped per the Landscape Plan if applicable.
- 12.2. The Grading Contractor shall maintain positive drainage away from buildings at all times. The Contractor shall bring to the attention of the Engineer any areas that may not drain properly during construction.
- 12.3. The sequence of work shall conform to the erosion control narrative.
- 12.4. Sediment controls during construction shall comply with all local, state, and federal laws and regulations. After all sitework is completed and grading established, the Grading Contractor shall remove all silt from the site and legally dispose of all silt off-site at no additional cost to the Owner, or bury on-site in non-structural area.
- 12.5. No work shall begin on site until approval from the TOWN OF MUNSTER and an IDEM NPDES permit has been issued, and a pre-construction meeting has been completed with the TOWN OF MUNSTER, the Owner, and the Engineer.
13. General:
- 13.1. The Contractor shall review the plans and specifications carefully and shall immediately notify the Engineer for a review if any discrepancies are discovered at the site or on the drawings.
- 13.2. All reference to state standards and specifications are made from the Indiana Department of Transportation Standard Specifications for Roads and Bridges, latest edition and Roadway Standard Drawings, latest edition.
- 13.3. All dimensions shown on the drawings are measured as shown and from outside face of building wall or to face of curb line, unless otherwise noted. Curb and Gutter is shown as three (3) lines (outside edge of gutter, face of curb, and back of curb).
- 13.4. All retaining wall design shall be per Architectural Plan or separate Structural Engineer's design notes and details. The Civil Plans shall not be considered plans for retaining wall construction.
- 13.5. The General Contractor is responsible for posting all required bonds that General Contractors are allowed to post.
- 13.6. If any conflicts between the notes, details, specifications, and drawings occur then by rule the stricter shall govern.

STANDARD EROSION AND SEDIMENT CONTROL NOTES

Startup

1. Sediment and erosion control devices shall be installed and functioning prior to beginning any project earth disturbing activities.
2. Soil stabilization shall be achieved on any area of a site where land-disturbing activities have temporarily or permanently ceased according to the following schedule:
- All perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1) shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 7 calendar days from the last land-disturbing activity.
 - All other disturbed areas shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within 14 calendar days from the last land-disturbing activity.
3. To secure the project site, locate limits of construction, protect areas that are to remain undisturbed, and prevent migration of construction debris, orange construction fencing shall be installed around areas not requiring silt fencing. Any accumulation of construction debris on public roadways or adjacent properties shall be removed within 24 hours. Care shall be taken when installing construction fencing to not obscure oncoming traffic at intersections, adjacent driveways and the project construction entrance.

Inspections and Maintenance

4. All sediment and erosion control devices shall be inspected every seven (7) days minimum or after every rain event. Damaged or ineffective devices shall be repaired or replaced, as necessary.
5. All sediment and erosion controls shall be inspected, at the specified inspection frequency, until construction is complete and the site is permanently stabilized.
6. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been permanently stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is permanently stabilized.
7. All existing and new storm water structures, affected by this project, shall be inspected and maintained clean of accumulated demolition debris or sediments. The inspection and maintenance of these structures shall be accomplished on the same schedule as the sediment and erosion control devices.
8. Disposal of all recovered sediments and construction debris shall be in accordance with all applicable City, State and Federal Regulations.
9. All erosion and sediment control plans and documentation (e.g., certification statements, inspection records, and maintenance records) shall be available on site during construction. All plans and documents shall be updated as required per NPDES General Permit.

Best Management Practices (BMPs)

10. A stabilized construction entrance shall be installed and maintained on the project site. Storm water inlet protection shall be provided for all inlets (upstream and downstream) within 50 ft. of the construction entrance (on both sides of the public roadway).
11. During the course of construction activities erosion and sediment controls shall be used to prevent; sediment accumulation on public roadways (including street gutters), sediment laden runoff from entering into existing storm water system inlets or depositing on adjacent properties, and airborne dust migration off-site. Any accumulation of sediment from the project site on public roadways or adjacent properties shall be removed within 24 hours.
- or
- The contractor must take necessary action to minimize the tracking of mud onto the paved roadway construction areas. The contractor shall daily remove mud/soil from pavement, as may be required.
12. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized immediately after the utility installation.
13. Silt fencing shall be placed no closer than 5 ft. downhill from the toe of any fill area.

14. Temporary stockpiling of useable or waste materials for more than fourteen (14) days shall have appropriate erosion and sediment control measures installed. Temporary stockpiles shall be placed away from storm water inlet structures, adjacent property and public roadways.
15. Litter, construction debris, oils, fuels, building products with significant potential for impact (such as stockpiles of freshly treated lumber), and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
16. Temporary diversion berms and/or ditches will be provided as needed during construction to protect areas from upslope runoff and/or to divert sediment laden water to appropriate traps or stable outlets.
17. If necessary, slopes which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydro seeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
18. Cat track or surface roughening is required for all slopes greater than 4:1 prior to seeding and lying of synthetic or vegetative mats. Cat tracking or surface roughening shall produce a surface with furrows running cross slope, parallel with slope contours, and perpendicular to surface runoff.

Close-out

19. The site shall be considered permanently stabilized when all surface disturbing activities are complete and either of the two following criteria are met:
- A uniform (e.g., evenly disturbed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
 - Equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) have been employed.
22. Upon completion of construction activities and meeting the conditions of permanent stabilization a Notice of Termination (NOT) shall be submitted to IDEM and a copy of the submitted NOT shall be sent to the Town of Munster.

IDEM SURFACE STABILIZATION

MATERIALS

- Soil Amendments - Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-12-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorous levels in the soil profile.
- Seed - Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
- Mulch
 - Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
 - Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

Table 1. Temporary Seeding Specifications

Seed Species¹	Rate per Acre	Planting Depth	Optimum Dates²
Wheat or Rye	150 lbs.	1 to 1½ inches	Sept. 15 – Oct. 30
Spring Oats	100 lbs.	1 inch	March 1 – April 15
Annual Ryegrass	40 lbs.	¼ inch	March 1 – May 1 Aug. 1 – Sept. 1
German Millet	40 lbs.	1 to 2 inches	May 1 – June 1
Sudangrass	35 lbs.	1 to 2 inches	May 1 – July 30
Buckwheat	60 lbs.	1 to 2 inches	April 15 – June 1
Corn (broadcast)	300 lbs.	1 to 2 inches	May 11 – Aug. 10
Sorghum	35 lbs.	1 to 2 inches	May 1 – July 15

¹ Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than one year (see **Permanent Seeding** on page 35).

² Seeding done outside the optimum seeding dates increases the chances of seeding failure. Dates may be extended or shortened based on the location of the project site within the state.

NOTES:
Mulch alone is an acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

APPLICATION

Seedbed Preparation

- Test soil to determine pH and nutrient levels.
- Apply soil amendments as recommended by the soil test. If testing is not done, apply 400 to 600 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
- Work the soil amendments into the upper two to four inches of the soil with a disk or rake operated across the slope.

Seeding

- Select a seed species or an appropriate seed mixture and application rate from Table 1.
- Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover seed to the depth shown in Table 1.

- Notes:**
- 1.1. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations.
 - 1.2. Daily seeding when the soil is moist is usually most effective.
 - 1.3. If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.

2. Apply mulch (see **Mulching** on page 55 or **Compost Mulching** on page 59) and anchor it in place.

MAINTENANCE

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or movement of mulch and repair immediately.
- Monitor for erosion damage and adequate cover (80 percent density); reseed, fertilize, and apply mulch where necessary.
- If nitrogen deficiency is apparent, top-dress fall seeded wheat or rye seeding with 50 pounds per acre of nitrogen in February or March.

EROSION CONTROL NOTES

SITE INFORMATION:

- Existing Condition: UNDEVELOPED LOT
- Proposed Condition: RETAIL USE - PAVEMENT & BUILDING
- Proposed Work: EXCAVATION & FILLING, BUILDING CONSTRUCTION, PAVING, & STORM DRAINAGE & UTILITY INSTALLATION
- Existing Soils: Rs (Rensselaer Loam), Bn (Bono Silty Clay)
- BMPs Shown on Plan: INLET PROTECTION, SILT FENCE, ROCK CHECK DAMS, CONSTRUCTION ENTRANCE, SKIMMER BASIN
- Disturbed Area: ±3.7 - ACRES

EROSION CONTROL SEQUENCE (for Contractor):

Phase I - Sheet C211:

- Schedule a Pre-Construction Meeting at the site with the Owner, Engineer, and any local inspectors at least 72 hrs prior to commencement of construction.
- Install the permit box on-site.
- Clearly mark the limits of disturbance.
- Install construction entrance, install BMPs, construct temporary sediment basin and install any perimeter silt fence BMP protection prior to demolition activities.
- Establish main Construction Entrance/ Exit.
- Continuously maintain all BMPs throughout construction. Remove accumulated sediment from BMPs and clean-out Sediment Basins as noted on plans.

Note: Contractor's price for work shall be all inclusive for installing and maintaining BMPs as shown on drawings.

Note: Maintenance of Sediment and Erosion Control Measures must continue until the site is permanently stabilized until the controls are removed.

Phase II - Sheet C212:

- Install temporary ditches/swales to divert stormwater to sediment basins as shown on sheet C212.
- Begin clearing and grubbing.
- Begin topsoil stripping as noted. Topsoil shall be re-used in grass or parking lot landscape islands/areas and on slopes after rough grading operations.
- Continuously maintain all BMPs throughout construction. Remove accumulated sediment from BMPs and clean-out sediment trap as noted on plans. NOTE: Contractor's price for work shall be all inclusive for installing and maintaining BMPs as shown drawings.
- Rough grade site. Temporary or Permanent grassing shall be established on areas disturbed with no activity for 7 days. Continuously remove accumulated silt/sediment from BMPs.
- Construct Building Laydown area and and Staging area around the proposed building pad.
- Install storm drainage, utilities, etc. as grade allows.
- Install Catch Basin Inlet protection at all catch basins as they are constructed.
- Install temporary ditches/swales to divert stormwater to catch basins as shown on sheets C212.
- Install Slope Matting on all slopes 3:1 or steeper (Tensar RECP per detail) on all slopes as noted on the Phase II Erosion Control Plan.

Phase III - Sheet C213

- Finalize Fine Grading and construct curb & gutter.
- Place stone as soon as possible on all areas to be paved and building pads.
- Respread topsoil (4" min.) evenly on unimproved areas and areas with no impervious surfaces proposed including all slopes.
- Permanently grass all areas not to be paved or built upon (ie outpads) or that receives landscaping/mulch. Establish 100% coverage with 70% density.
- Finalize all paving and grassing to achieve final stabilization.
- Remove silt/sediment from all BMPs and dispose of legally or on-site as approved by the soil testing company.
- Once site is finalized with 100% grass coverage and 70% density contact local inspector and Engineer of Record for closeout inspection.
- Address any punchlist items from closeout inspection.
- Remove temporary BMPs once site is accepted for closeout by local issuing authority.
- Contact Engineer and schedule final walkthrough. Engineer will coordinate with Owner to apply for NOT (Stormwater).

Note: Contractor's price for work shall be all inclusive for installing and maintaining BMPs as shown on drawings.

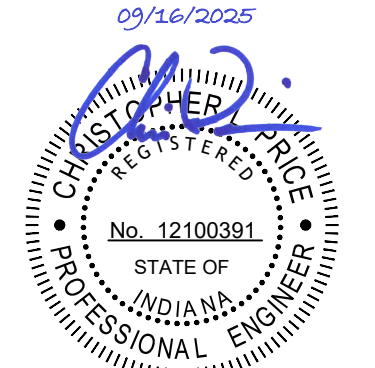
Note: Maintenance of Sediment and Erosion Control Measures must continue until the site is permanently stabilized until the controls are removed.

CONTRACTOR TO PERFORM SELF INSPECTION ON ALL SEDIMENT AND EROSION CONTROL MEASURES AFTER EACH PHASE OF CONSTRUCTION TO ENSURE THE EROSION CONTROL & SEDIMENTATION PLANS ARE BEING FOLLOWED. COMPLETE THE SELF-INSPECTION REPORT (OBTAIN FROM NCDENR WEBSITE) AND PROVIDE TO OWNER AND ENGINEER.

Project Number: 2025-104
DWG Name: 2025-104 details.dwg
Drawing Scale: AS NOTED
Date of Project: 8-1-2025
Engineer of Record:
Christopher L. Price, P.E.
South Carolina PE # 22396
Indiana PE # 12100391
bluewater civil design, llc
bluewater civil design, llc
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com
Certificates of Authorization:
SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

Self Storage Munster IN

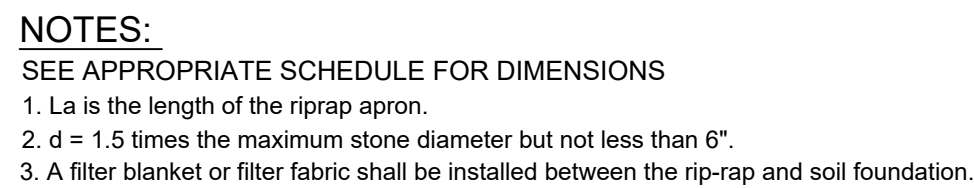
45th Street
Munster, IN 46321



PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	8-7-2025	ISSUED FOR REVIEW
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SITEWORK NOTES & DETAILS

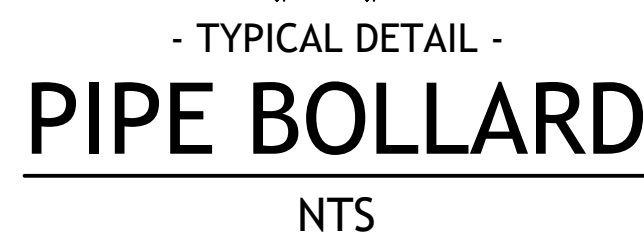
C501

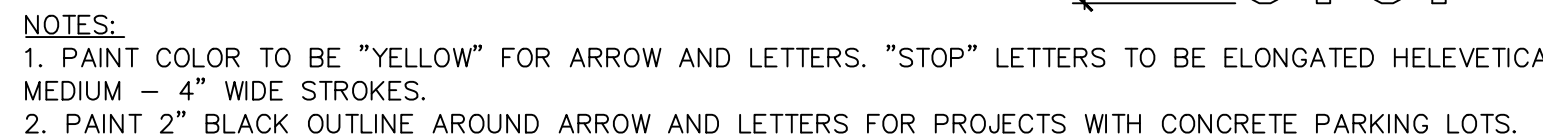


NOTES:

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA





NOT TO SCALE



- TYPICAL SECTION -
ADA RAMP DETAIL



NTS

[illegible]

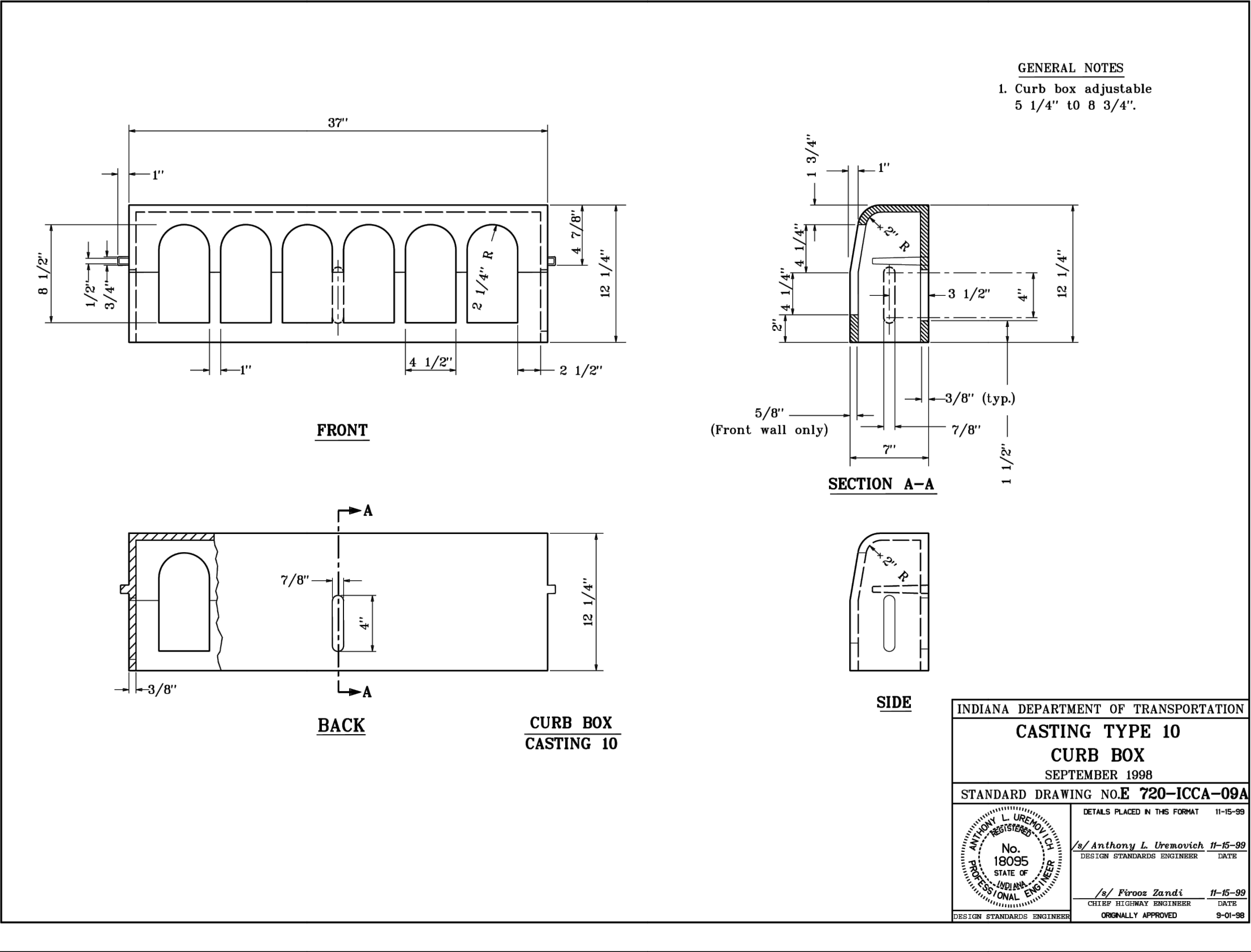
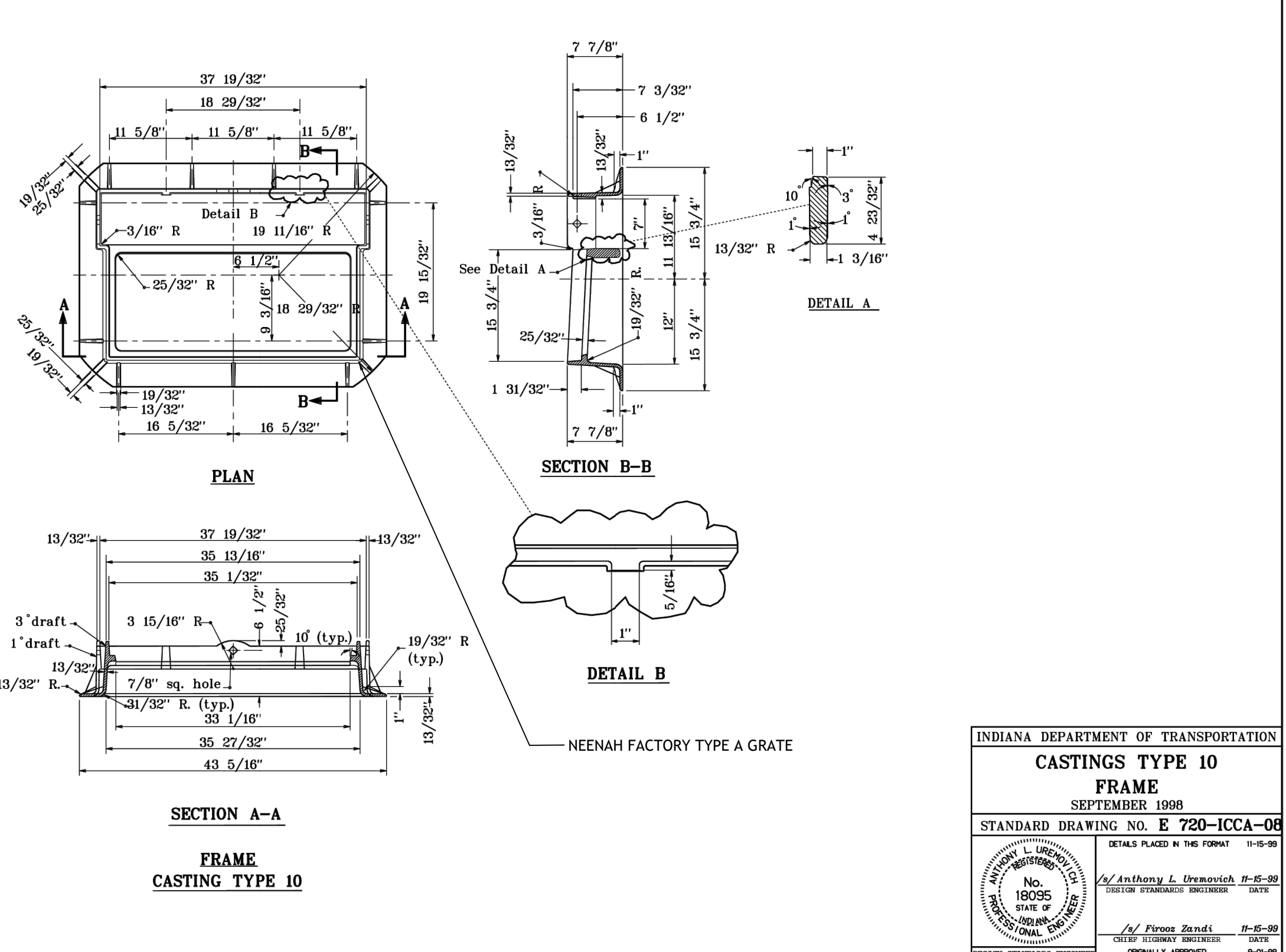
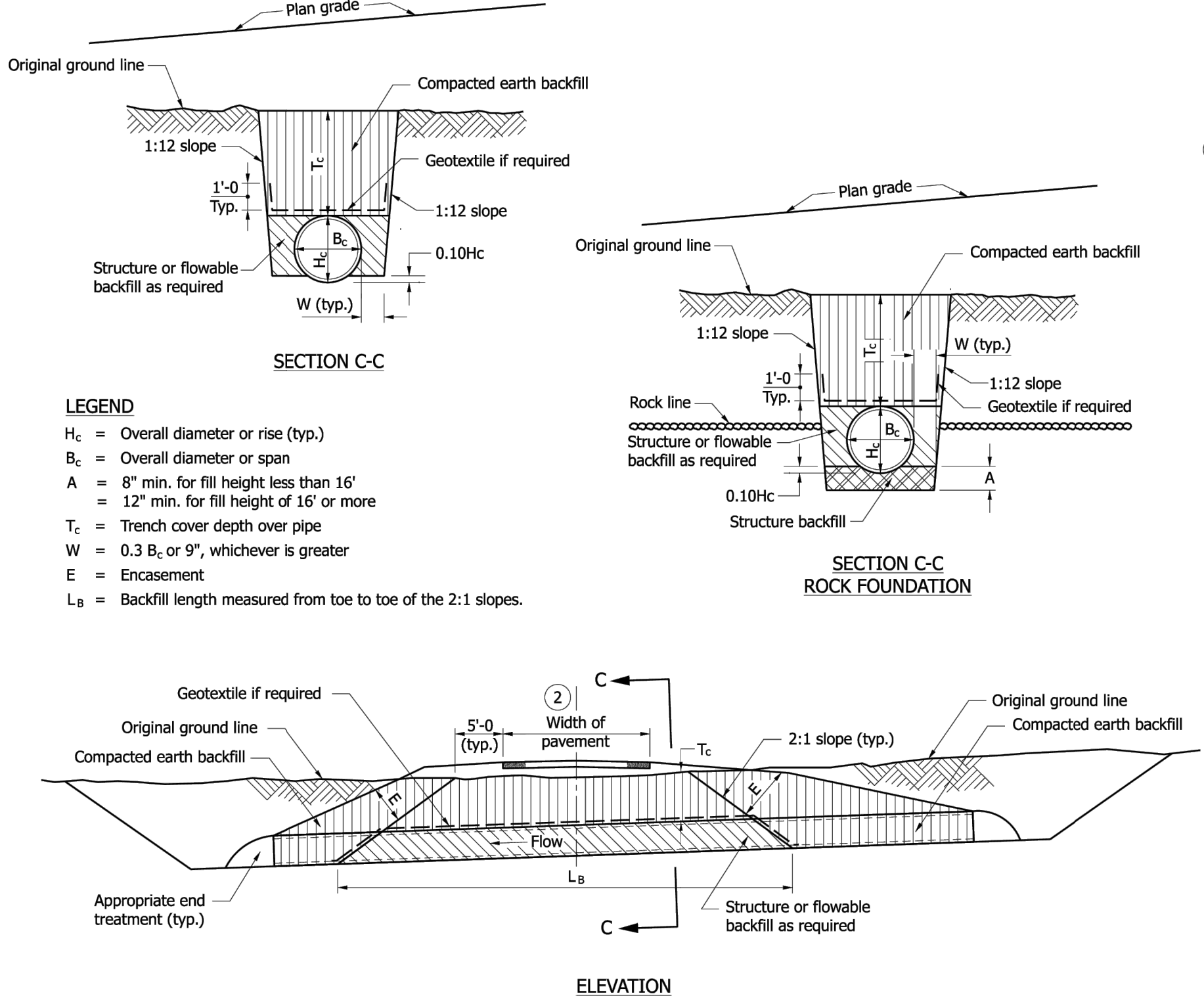
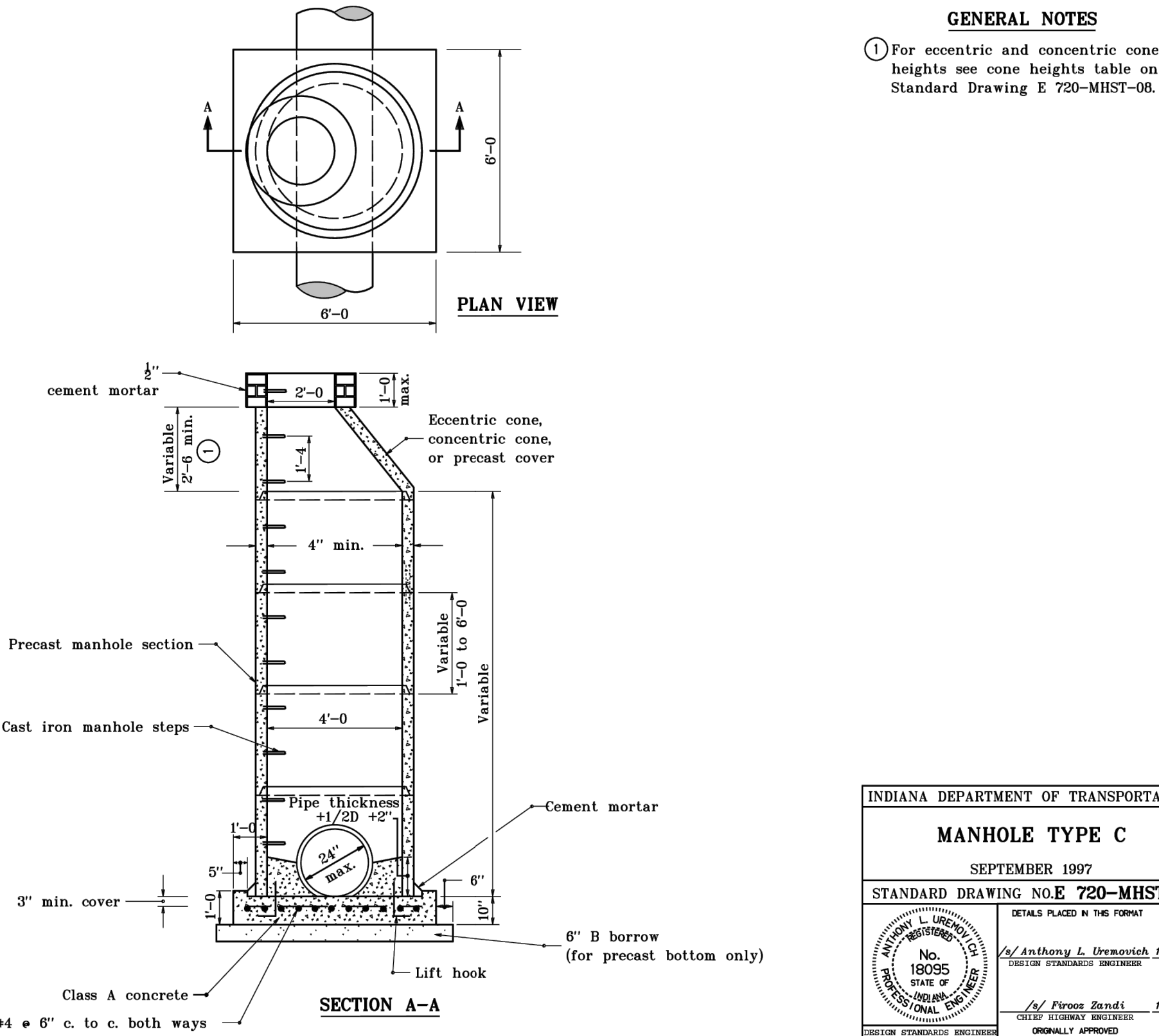
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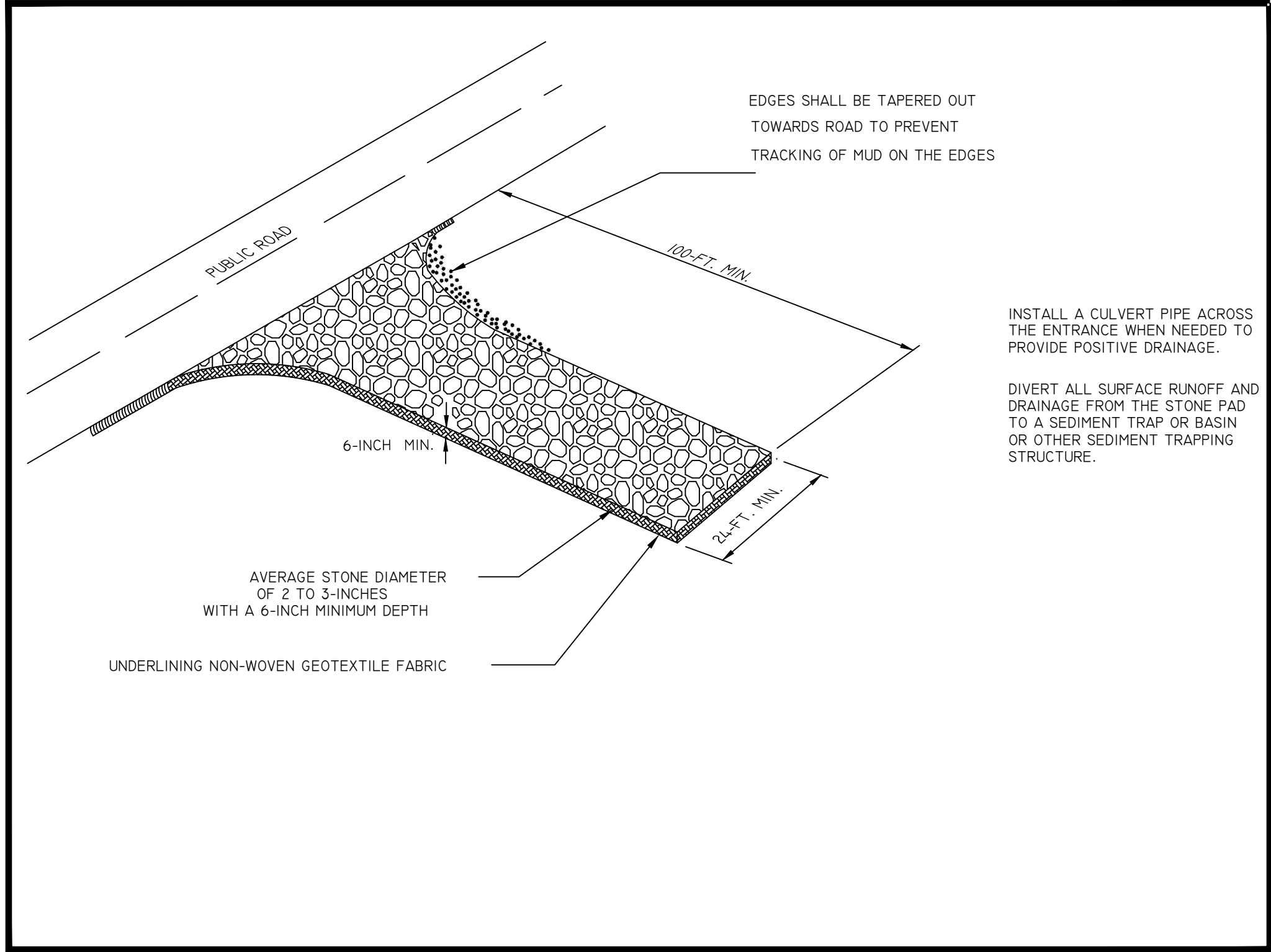
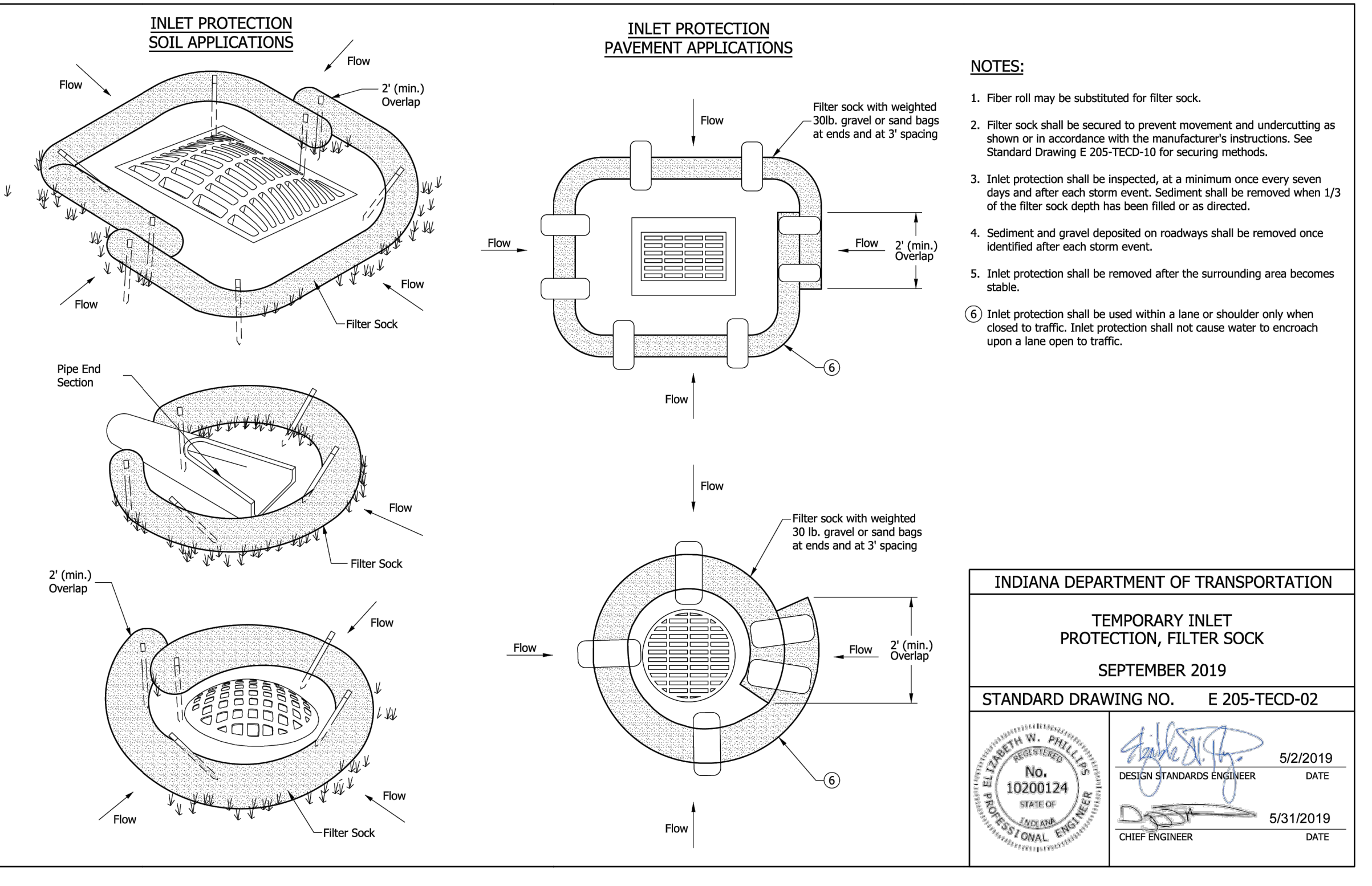
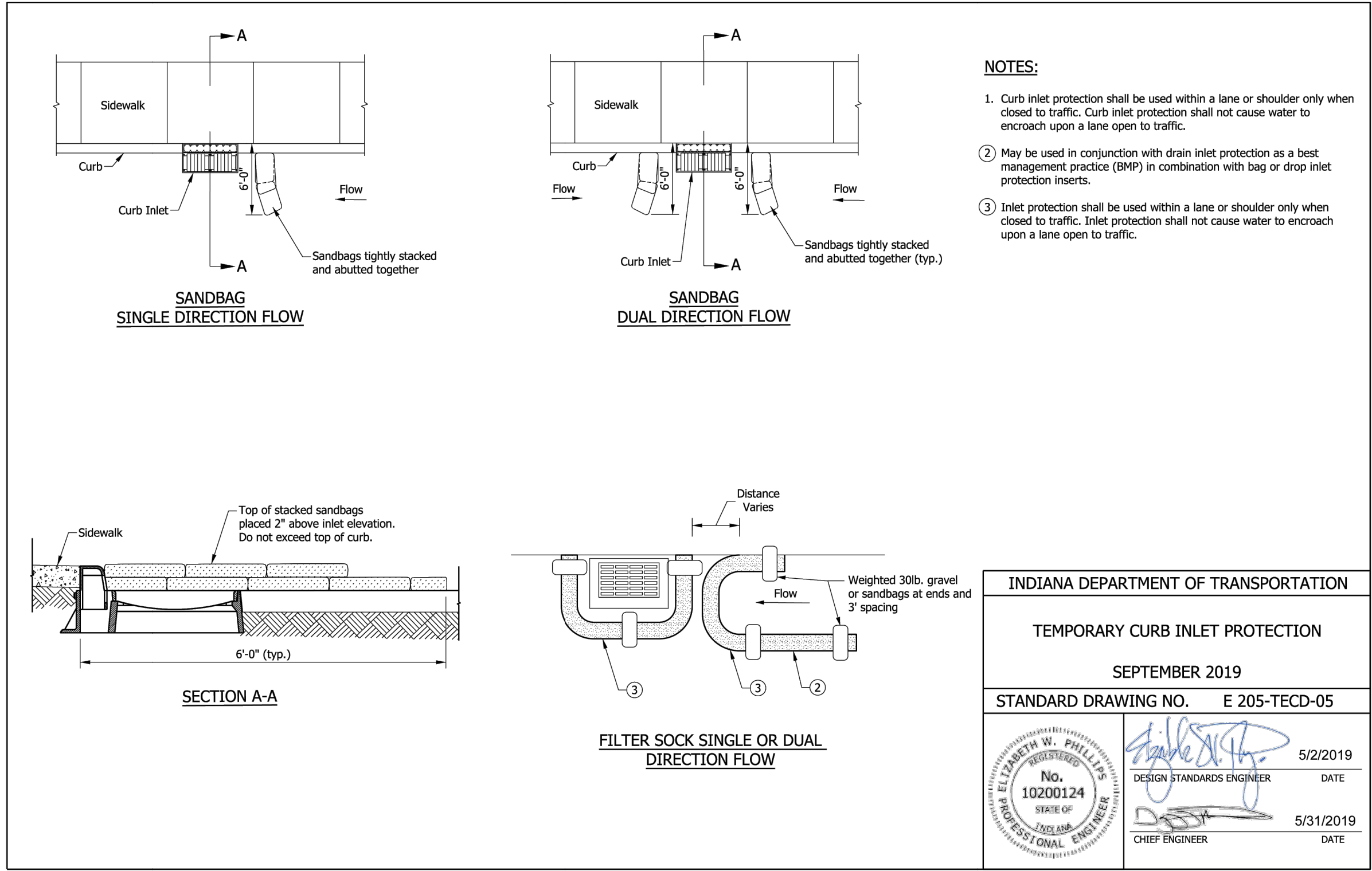
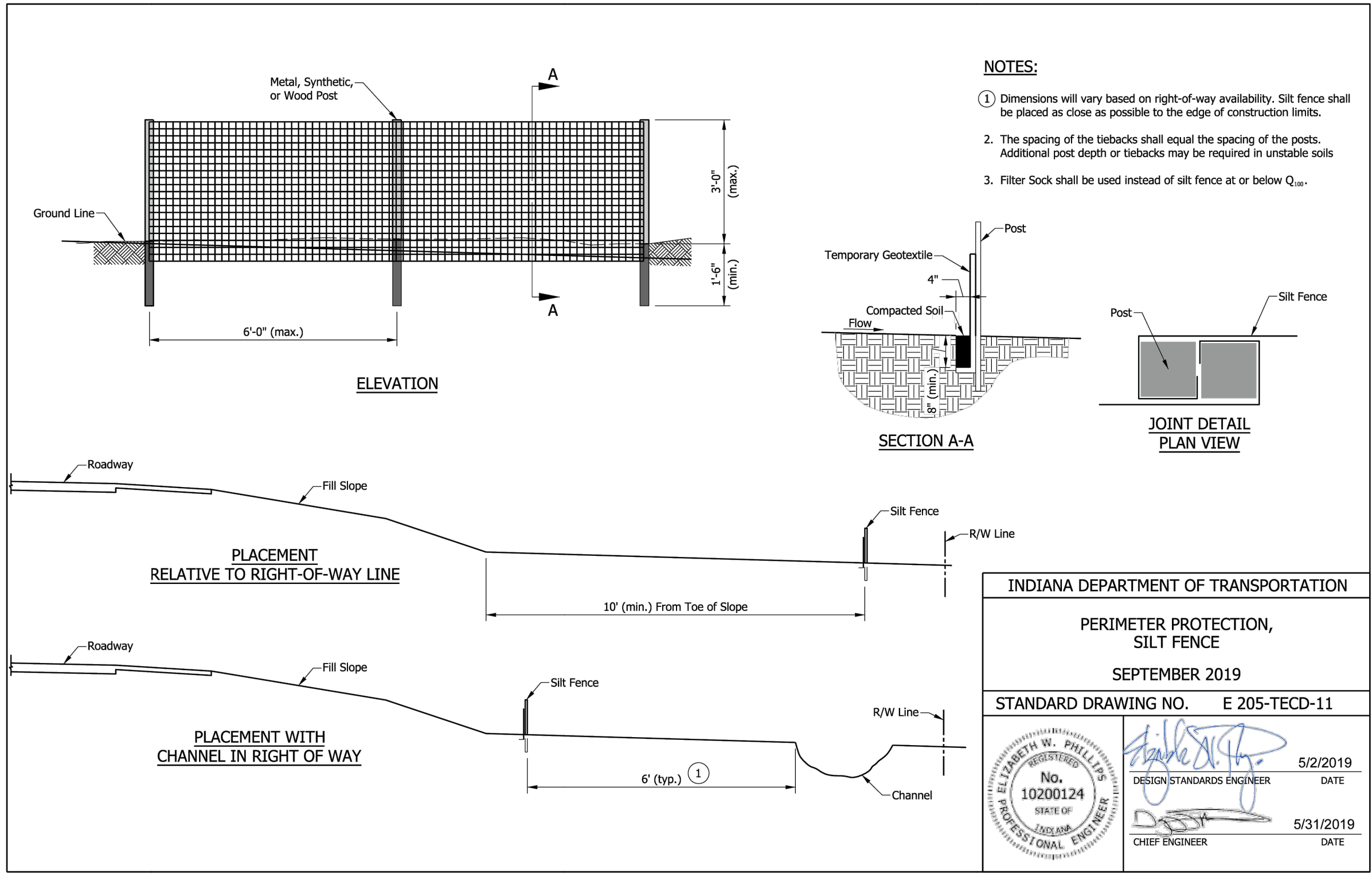
- TYPICAL DETAIL -
STORM DRAINAGE MANHOLE
NTS

- TYPICAL DETAIL -
STORM DRAINAGE BEDDING
NTS

- TYPICAL DETAIL -
CATCH BASIN - HOODED GRATE INLET
NTS

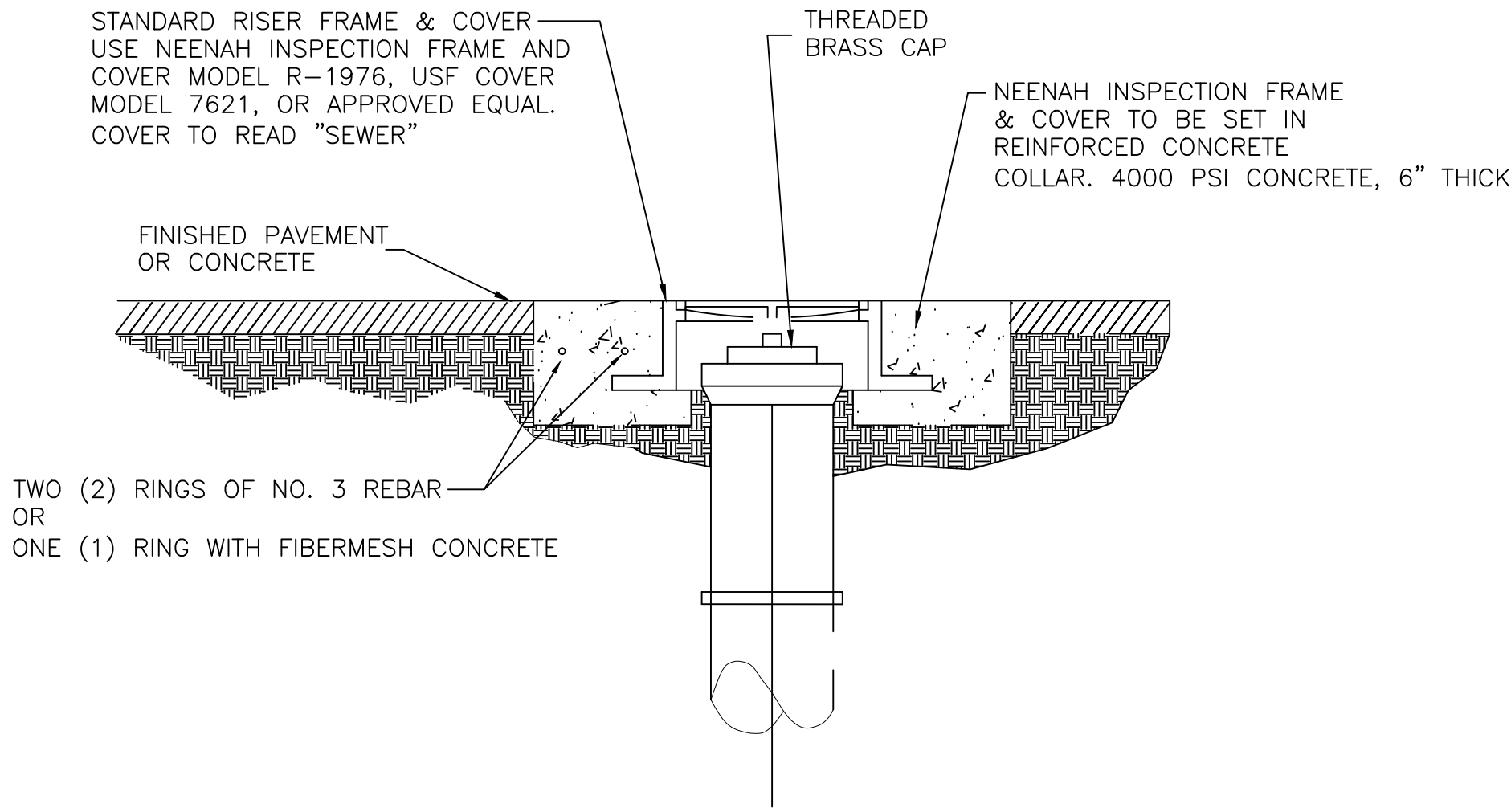
- TYPICAL DETAIL -
CATCH BASIN - HOODED GRATE INLET
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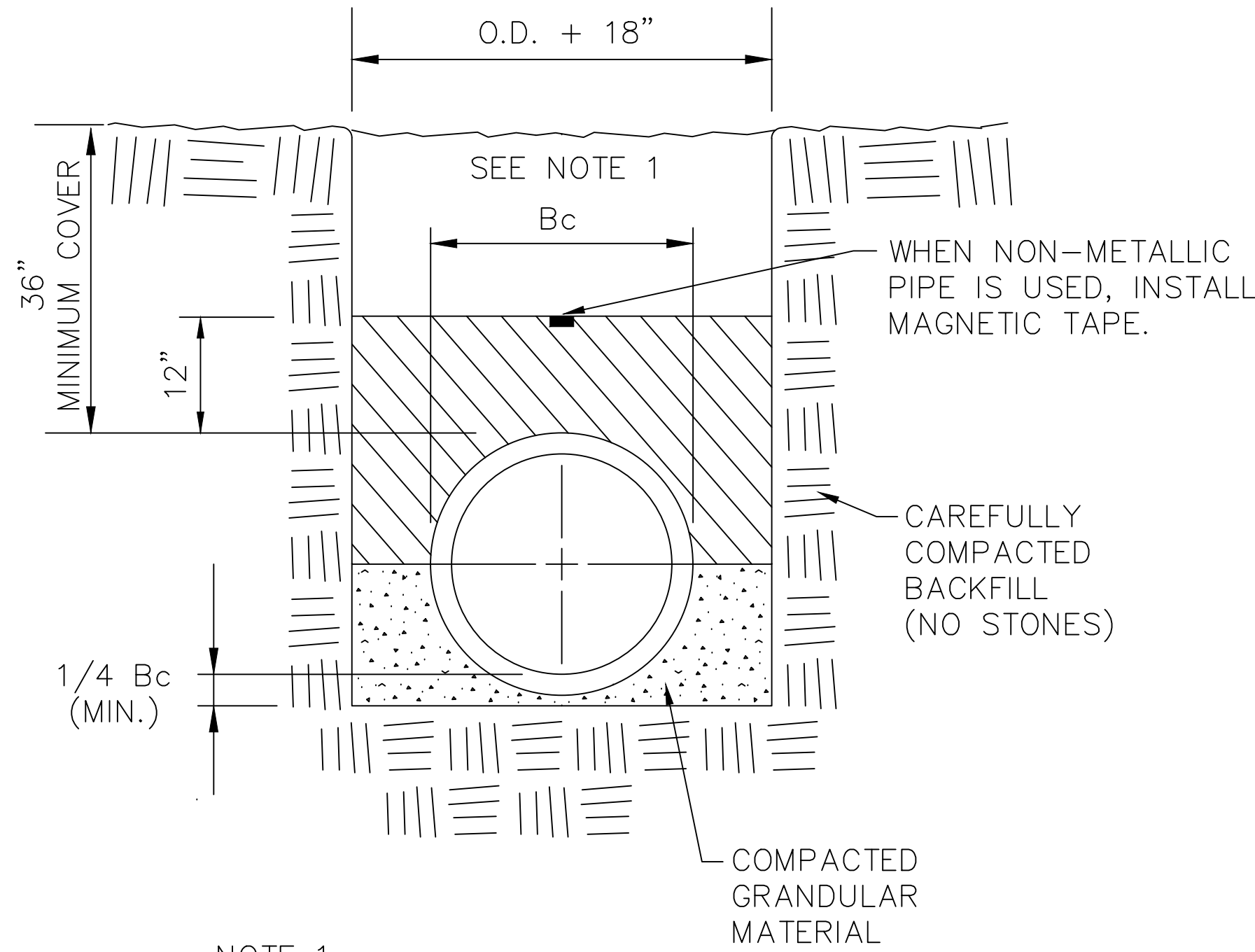
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NOTE: THE INSPECTION FRAME AND COVER IS TO BE USED IN ALL PAVED AND CONCRETE APPLICATIONS.



SANITARY SEWER CLEANOUT DETAIL

NOT TO SCALE

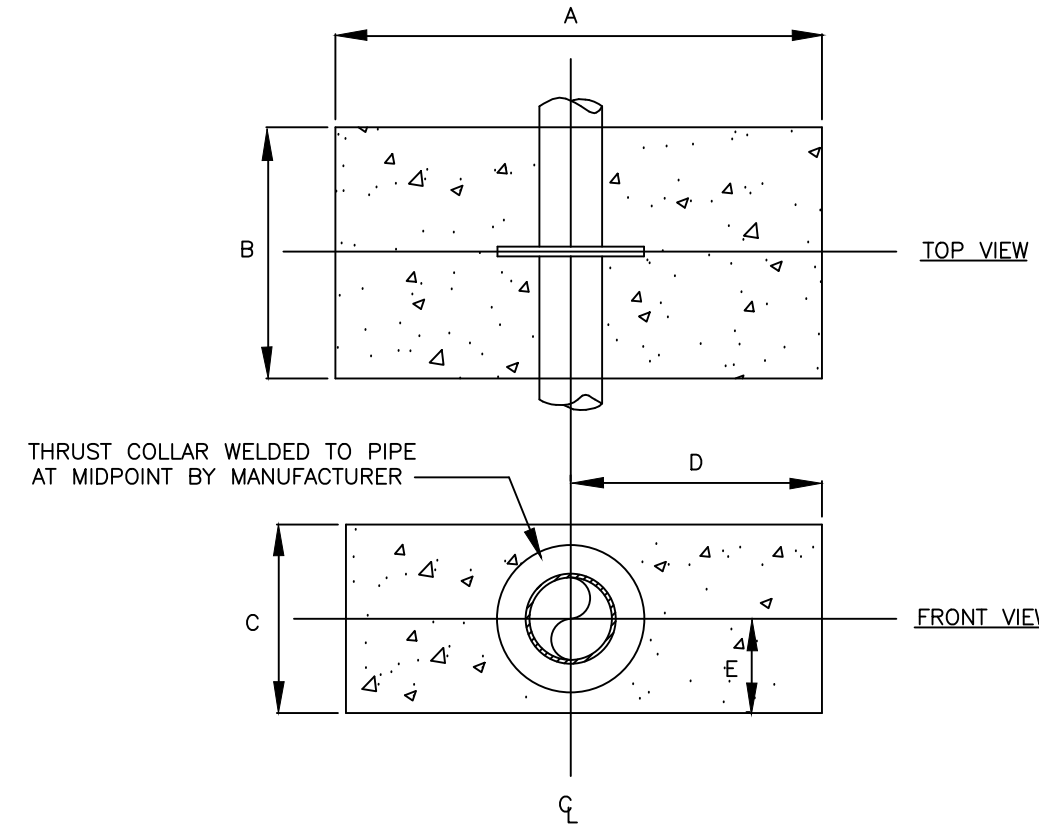


NOTE 1:
INSTALLATION IN PUBLIC R/W REQUIRES
COMPACTION OF 90% STANDARD PROCTOR.
AFTER INSTALLATION, SURFACE MUST BE
TOPSOILED AND GRASSED AS REQUIRED
BY REGULATORY AUTHORITY.

TYPICAL SEWER PIPE BEDDING

NOTES:

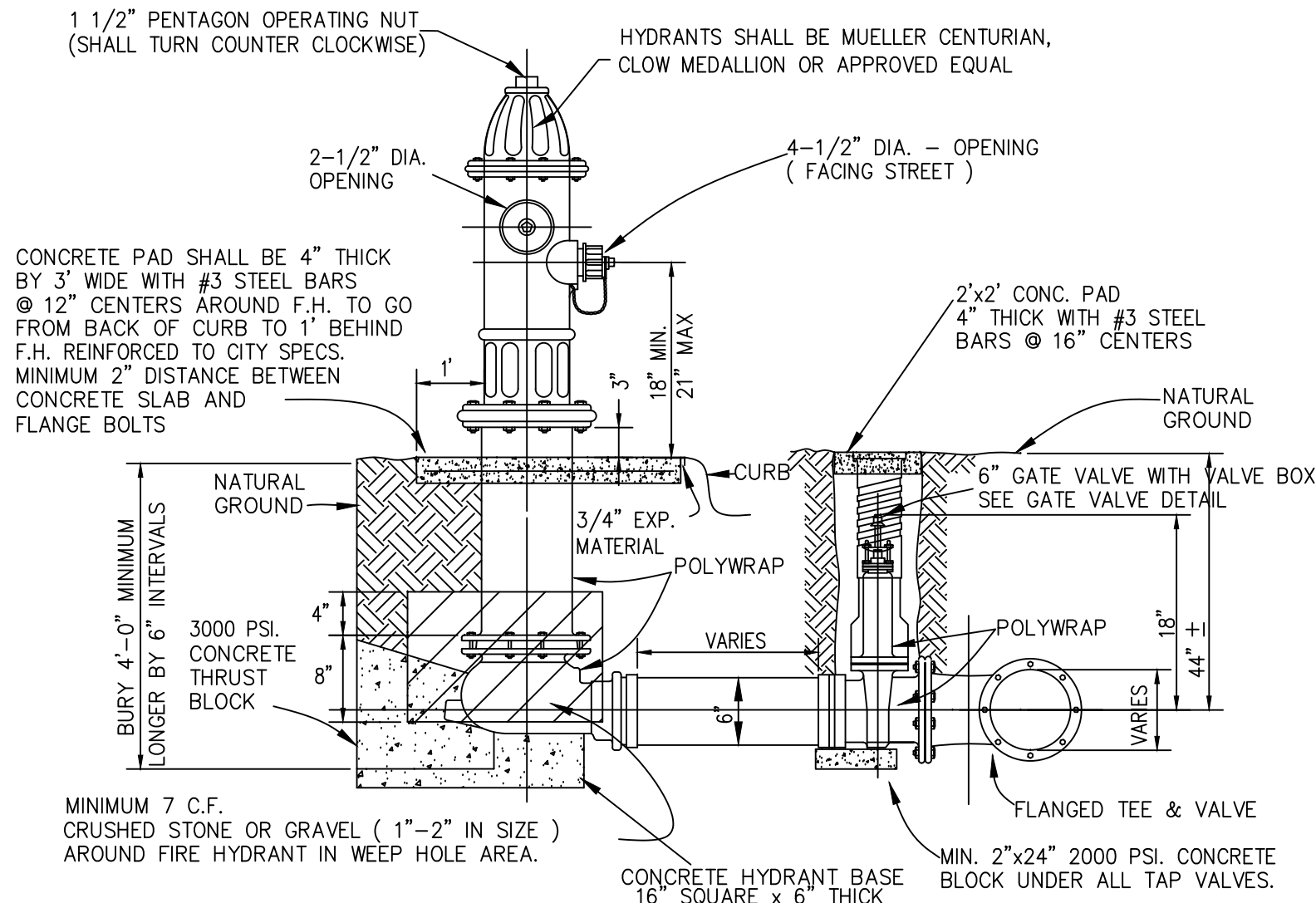
- DIMENSIONS OF CONCRETE COLLARS BASED ON 2000 P.S.F. SOIL BEARING.
- DIMENSIONS OF WELDED STEEL OR DUCTILE IRON THRUST COLLARS SHALL CONFORM TO THE PIPE MANUFACTURER'S SUPPLIED SHOP DRAWINGS WHICH SHALL INDICATE A THRUST RATING NOT LESS THAN THAT INCLUDED IN THE CHART BELOW.
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS. "HIGH EARLY" CONCRETE SHALL BE USED.
- SOIL CONDITIONS SHALL BE VERIFIED BY THE INSPECTOR PRIOR TO CONSTRUCTION.
- FOR 3" PIPE USE 4" DIAMETER THRUST RATING.



PIPE SIZE	A	B	C	D	E	CY	WELDED THRUST COLLAR MINIMUM RATING
4"	3'-0"	2'-0"	1'-6"	1'-6"	9"	0.33	4,500 lbs
6"	4'-0"	2'-0"	1'-6"	2'-0"	9"	0.44	9,300 lbs
8"	4'-6"	2'-0"	2'-0"	2'-3"	1'-0"	0.67	16,000 lbs
12"	6'-0"	2'-0"	3'-0"	3'-0"	1'-6"	1.33	34,000 lbs
16"	6'-6"	2'-0"	4'-6"	3'-3"	2'-3"	2.17	59,000 lbs

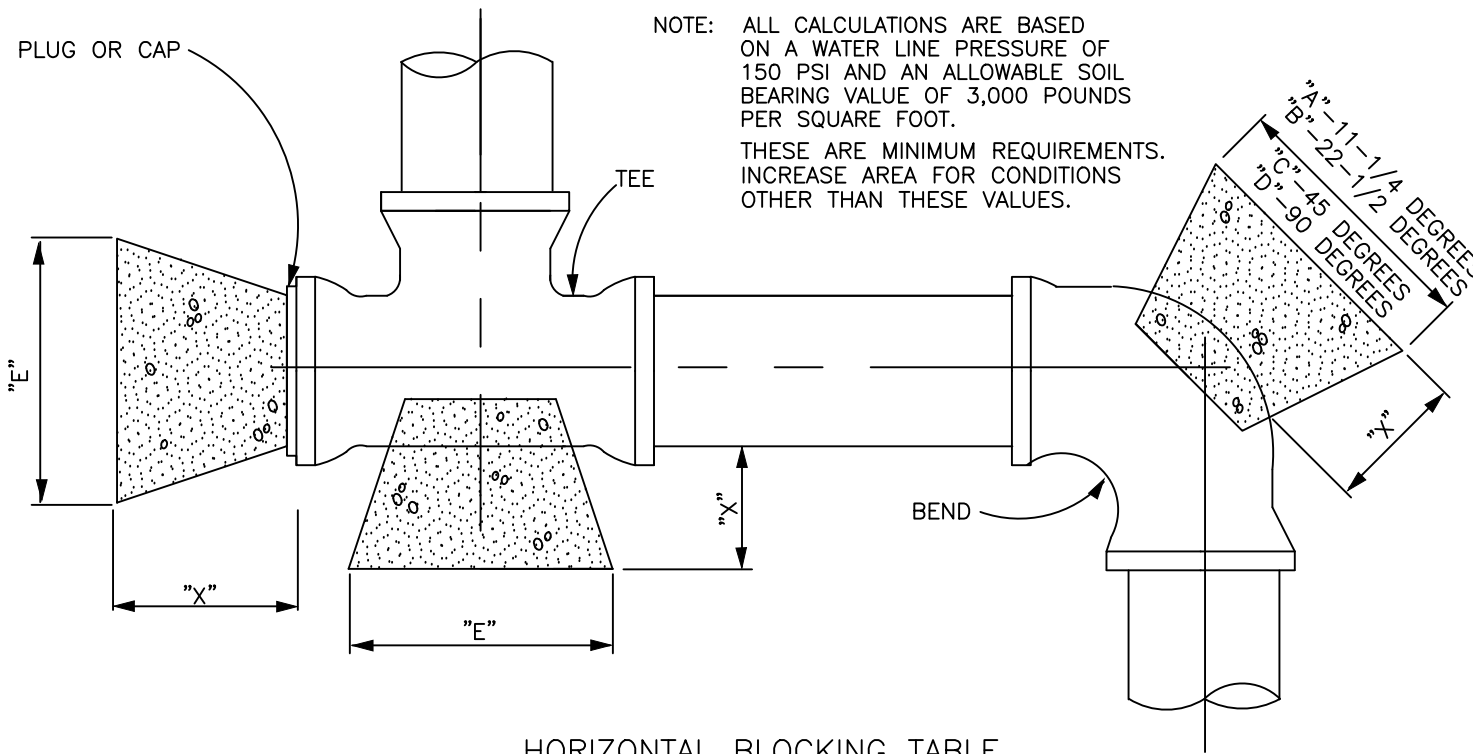
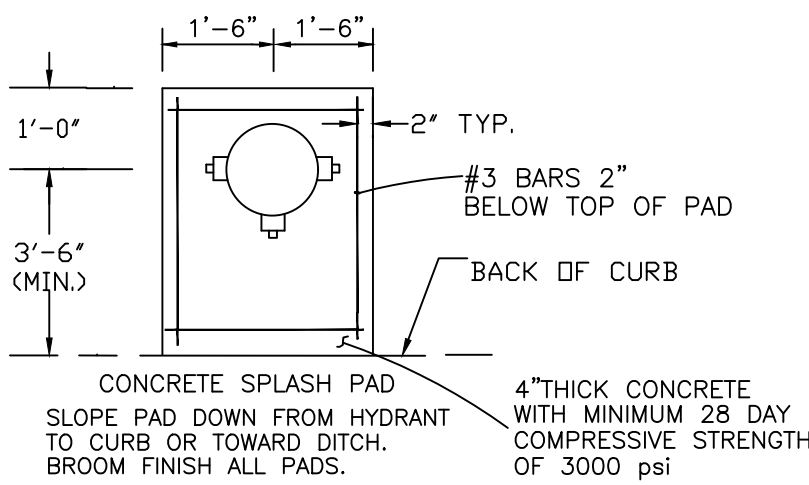
TYPICAL CONCRETE COLLAR DETAIL

N.T.S.



NOTES:

- FIRE HYDRANTS SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED SIDEWALKS
- FIRE HYDRANTS SHALL BE INSTALLED PRIMED ONLY. THEY SHALL BE PAINTED AFTER INSTALLATION.
- FIRE HYDRANTS SHALL BE COATED WITH 2 COATS BENJAMIN MOORE PAINT RUST INHIBITOR #16378 ALUMINUM OR EQUAL.
- DOUBLE WRAP ALL D.I. FITTINGS WITH POLY WRAP INCLUDING BOLTS AND NUTS.
- INSTALL RESTRAINED OFFSET BENDS OR "GRADELOCK" FITTINGS ON FIRE HYDRANT SUPPLY LINE SO FIRE HYDRANT BURY DEPTH IS NO GREATER THAN SIX FEET.
- ALL FITTINGS SHALL INCORPORATE MEGALUG MECHANICAL JOINT RESTRAINTS OR APPROVED EQUAL.
- SWIVEL SOLID ADAPTER ON CONCRETE CYLINDER PIPE FLANGED OUTLET.



HORIZONTAL BLOCKING TABLE

PIPE SIZE	"x" DIM. IN. FT.	11-1/4 DEGREES	22-1/2 DEGREES	45 DEGREES	90 DEGREES	TEE & PLUG
4"	1.5	1.00	1.00	1.00	1.00	1.00
6"	1.5	1.00	1.00	1.00	1.14	1.30
8"	1.5	1.00	1.00	1.08	1.18	1.52
10"	1.5	1.00	1.00	1.35	1.84	1.90
12"	1.5	1.00	1.33	1.63	2.65	1.86
14"	1.5	1.03	1.81	1.90	3.60	2.66
16"	2.0	1.18	2.36	2.17	4.71	3.04
18"	2.0	1.33	2.99	2.44	5.96	3.42
20"	2.0	1.48	3.70	2.71	7.35	3.80
21"	2.0	1.55	4.07	2.85	8.11	3.99
24"	2.0	1.77	5.32	3.25	10.59	4.56
27"	2.5	1.99	6.73	3.66	13.40	5.13
30"	2.5	2.22	8.31	4.07	16.55	5.70
33"	2.5	2.44	10.06	4.47	20.02	6.27
36"	2.5	2.66	11.97	4.88	23.83	6.84
39"	3.0	2.88	14.05	5.29	27.97	7.41
42"	3.0	3.10	16.30	5.69	32.43	7.98

NOTE: CLASS "B" CONCRETE 2,000 PSI SHALL BE USED FOR ALL BLOCKING UNLESS OTHERWISE NOTED ON STANDARD DETAILS AND / OR PLANS.

THE MINIMUM VERTICAL DIMENSION OF ALL BLOCKING SHALL BE 1.5 TIMES THE PIPE DIAMETER WITH AT LEAST 0.75 TIMES THE PIPE DIAMETER EXTENDING BOTH ABOVE AND BELOW THE PIPE CENTERLINE. THIS DIMENSION DETERMINES THE "A" DIMENSION FOR 11-1/4 BENDS.

FOR 22-1/2", 45°, 90°, AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA.

ALL MINIMUM AREAS ARE IN SQUARE FEET.

BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

DOUBLE WRAP ALL D.I. FITTINGS INCLUDING BOLTS AND NUTS WITH POLY WRAP AND TAPE IN PLACE.

NOTE:
SOIL CONDITIONS SHALL BE VERIFIED BY THE INSPECTOR BEFORE DESIGN IS IMPLEMENTED.

DESIGN DATA:

- DIMENSIONS OF THRUST BLOCK IN FEET BASED ON 2000 POUNDS PER SQUARE FOOT SOIL BEARING PRESSURE AND 200 POUNDS PER SQUARE INCH TEST PRESSURE. ACTUAL INSIDE DIAMETER OF DUCTILE IRON PIPE, CLASS 51 USED AS STANDARD.
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS. HIGH EARLY CONCRETE SHALL BE USED.

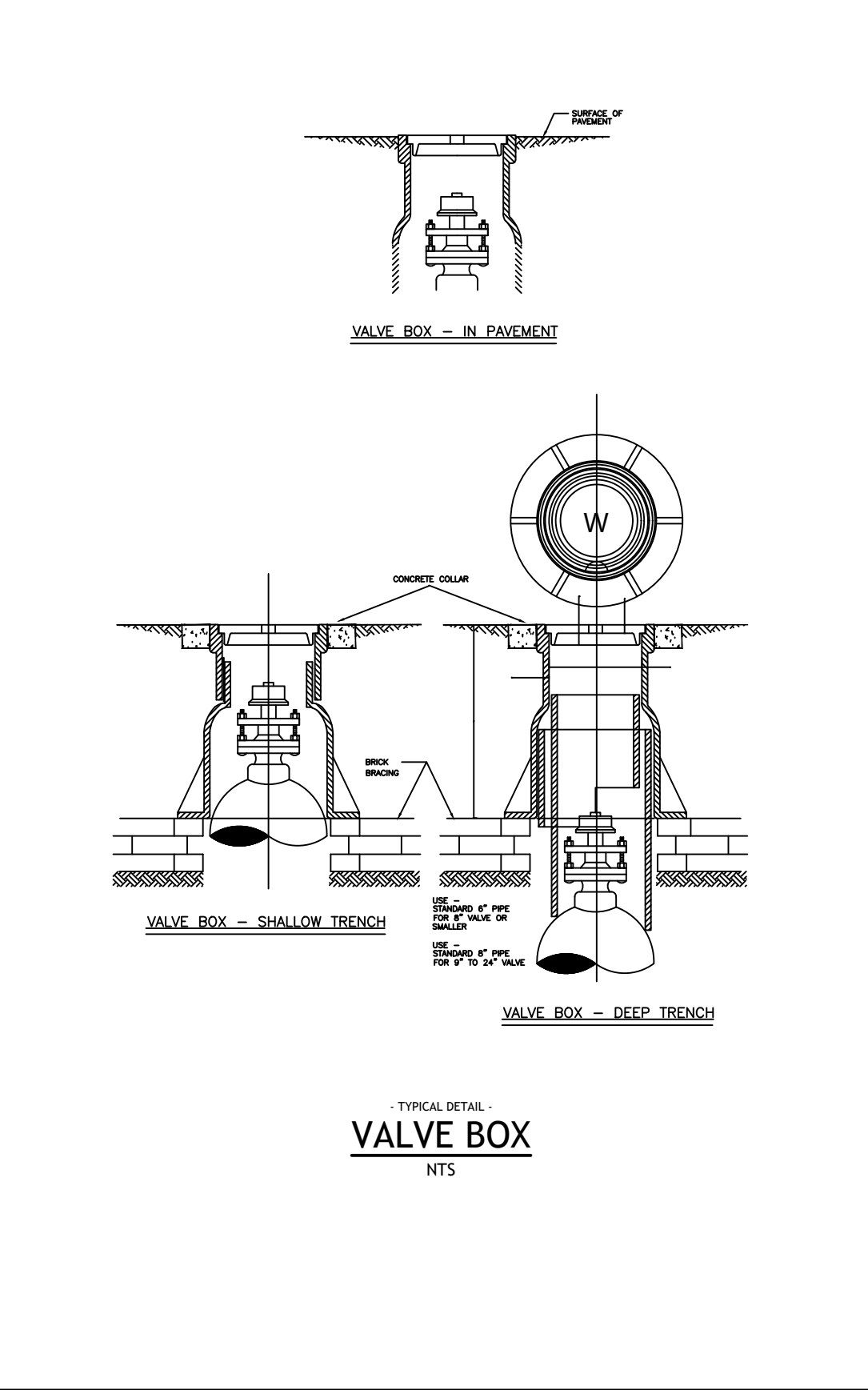
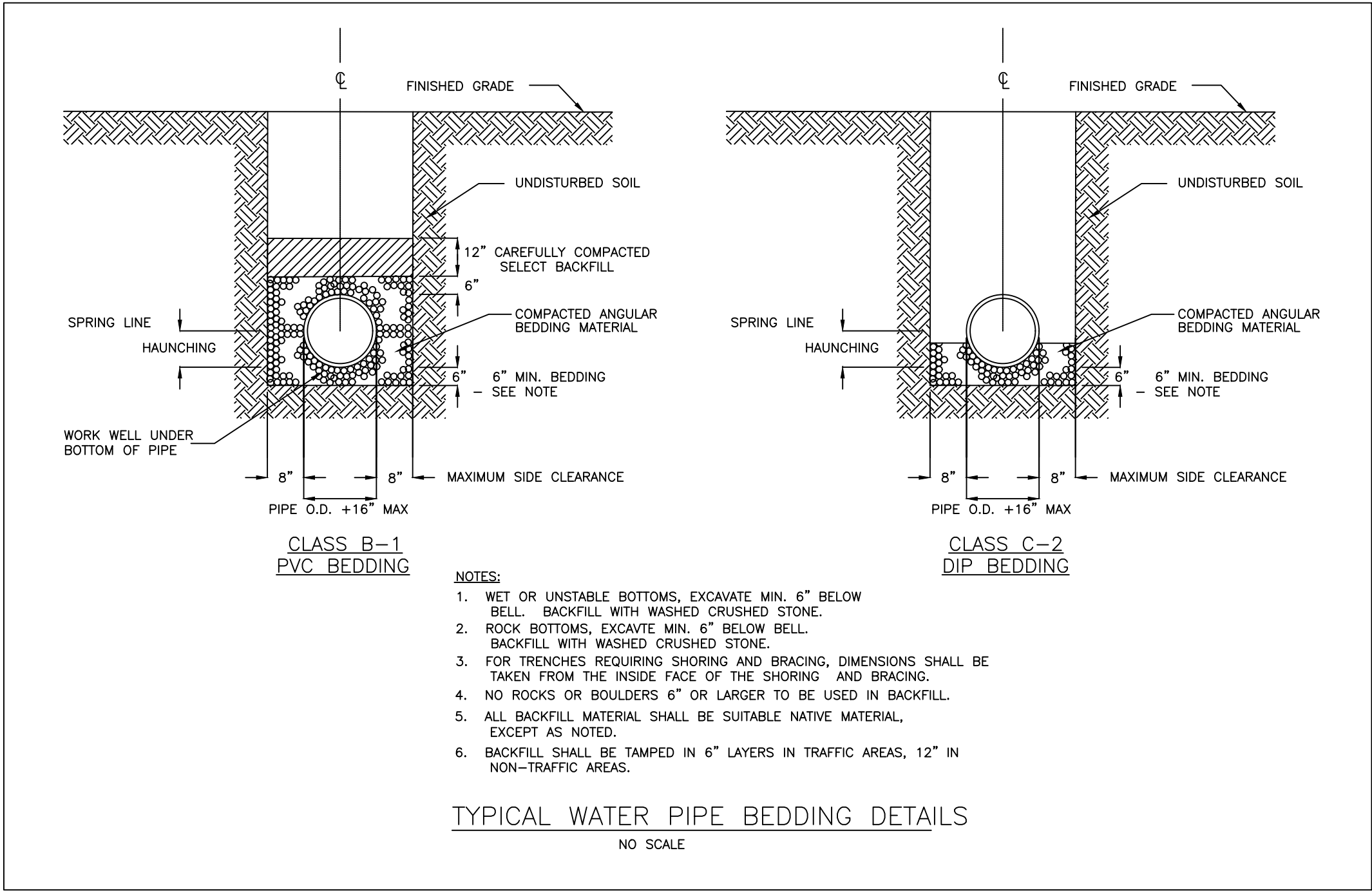
MINIMUM DIMENSIONS FOR CONCRETE BLOCKING

BEND	SIZE	A	B	C	D	VOLUME CY
11 1/4°	6"	1'-0"	2'-0"	4"	1'-0"	0.05
	8"	1'-0"	2'-0"	5"	1'-0"	0.05
	12"	1'-0"	2'-0"	7"	1'-0"	0.05
	16"	1'-0"	2'-0"	1'-0"	2'-0"	0.22
	20"	2'-0"	3'-0"	1'-3"	2'-0"	0.32
22 1/2°	6"	1'-0"	2'-0"	6"	1'-0"	0.05
	8"	1'-0"	2'-0"	7"	1'-0"	0.05
	12"	1'-0"	2'-0"	10"	2'-0"	0.11
	16"	2'-0"	4'-0"	1'-0"	2'-0"	0.37
	20"	2'-0"	4'-0"	1'-3"	3'-0"	0.58
45°	6"	1'-0"	2'-0"	6"	1'-0"	0.05
	8"	1'-0"	2'-0"	7"	2'-0"	0.10
	12"	2'-0"	3'-0"	11"	3'-0"	0.44
	16"	3'-0"	5'-0"	1'-0"	3'-0"	1.00
	20"	4'-0"	6'-0"	1'-3"	4'-0"	2.15
90°	6"	1'-0"	2'-0"	6"	1'-0"	0.05
	8"	2'-0"	3'-0"	1'-2"	2'-6"	0.37
	12"	2'-0"	4'-0"	2'-0"	4'-0"	0.84
	16"	4'-0"	6'-0"	2'-2"	4'-0"	2.84
	20"	4'-0"	7'-0"	2'-8"	6'-4"	4.51
TEES, PLUGS & TS & V	6"	1'-0"	2'-0"	6"	1'-0"	0.05
	8"	1'-9"	2'-6"	1'-1"	2'-0"	0.23
	12"	2'-6"	3'-9"	1'-7"	3'-0"	0.75
	16"	3'-0"	5'-0"	2'-2"	4'-0"	1.69
	20"	4'-0"	6'-0"	2'-8"	5'-0"	3.21

FOR 3" & 4" USE 6" SIZES

TYPICAL HORIZONTAL THRUST BLOCK

N.T.S.



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