CONSTRUCTION PLANS FOR

IOWA STATE PATROL-POST 3 PARKING LOT REPLACEMENT

POTTAWATTAMIE COUNTY, IOWA



VICINITY MAP

PROJECT LOCATION

Sheet List Table

CD01 TITLE

CD02 PROJECT INFO & QUANTITIES

CD06 SWPPP CD07 DETAILS **ARKING** 0 ATRO

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. 09/13/2024 Elizabeth A. Hunter, P.E. License Number P18178 My License Renewal Date is December 31, 2024. Pages or sheets covered by this seal: CD01 THRU CD07



Project No: 124.0835.10

Sheet CD01

Project Information

PROJECT ADDRESS: 2025 HUNT AVE COUNCIL BLUFFS, IA 51503

DAS PROJECT #: 9371.00

RFB #: 937100-01

GENERAL NOTES

- NOTIFY OWNER AND ENGINEER AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- LOCATION OF EXISTING UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES SHOWN ARE FROM AVAILABLE SURVEYS AND RECORDS. THESE LOCATIONS SHOULD BE CONSIDERED AS APPROXIMATE ONLY, WITH POSSIBILITY THAT OTHER UTILITIES OR UNDERGROUND FEATURES MAY EXIST. DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS.
- NOTIFY UTILITY COMPANIES PRIOR TO COMMENCING WORK. AVOID DAMAGE TO UTILITIES AND UNDERGROUND FEATURES DURING CONSTRUCTION. REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE
- COORDINATE CONSTRUCTION OPERATIONS AND COOPERATE WITH UTILITY COMPANIES WITH RESPECT TO RELOCATING ANY CONFLICTING FACILITIES. COSTS FOR LOCATING EXISTING UTILITIES, COORDINATING RELOCATION WORK, PROVIDING TEMPORARY SUPPORTS, AND STAGING CONSTRUCTION TO ACCOMMODATE THE RELOCATION OF UTILITIES IS INCIDENTAL TO CONSTRUCTION.
- PROVIDE EROSION CONTROL MEASURES NECESSARY TO PROTECT AGAINST SILTATION, EROSION AND DUST POLLUTION WITHIN CONSTRUCTION LIMITS AND ANY OFF-SITE AREAS USED FOR THIS PROJECT. COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF IOWA CODE AND LOCAL ORDINANCES.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETED.
- COORDINATE THE CONSTRUCTION TO MINIMIZE THE DISRUPTIONS TO THE ADJACENT PROPERTIES. ANY AREAS DISTURBED BY CONSTRUCTION OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE REPAIRED AND RESTORED AT THE CONTRACTOR'S EXPENSE.
- DO NOT RESTRICT DRAINAGE CHANNELS. PROTECT ALL EXISTING DRAINAGE STRUCTURES. CONTRACTOR FULLY LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN THE HANDLING OF STORM WATER FLOWS DURING CONSTRUCTION. ANY EXTRA GRADING WORK NEEDED TO MAINTAIN POSITIVE DRAINAGE WITHIN THE CONSTRUCTION LIMITS IS INCIDENTAL TO CONSTRUCTION.
- REPAIR ALL FIELD/DRAIN TILES THAT ARE ENCOUNTERED DURING CONSTRUCTION AS SPECIFIED. RECORD THE EXISTING TYPE, SIZE, LOCATION AND DEPTH OF ALL FIELD/DRAIN TILES ENCOUNTERED AND REPAIRED DURING CONSTRUCTION. PROVIDE DATA TO THE ENGINEER FOR INCORPORATION INTO THE RECORD
- PROTECT AND KEEP DEBRIS DEPOSITED BY THE CONSTRUCTION OFF OF ADJACENT PROPERTIES OUTSIDE THE EASEMENT AREA AND STREETS. REMOVE AND REPAIR ANY DAMAGE WITHOUT ADDITIONAL COMPENSATION.
- COMPLETELY REMOVE AND DISPOSE OF TREES, SHRUBS AND VEGETATION DESIGNATED FOR REMOVAL ON THE PLANS. DISPOSE OF IN ACCORDANCE WITH SPECIFICATIONS.
- CONTRACTORS SHALL SATISFY THEMSELVES PRIOR TO SUBMISSION OF BIDS AS TO THE SOIL CONDITIONS.
- PROTECT AND SAVE ALL PROPERTY CORNER MONUMENTS. REPLACE IF REMOVED OR DAMAGED.
- PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH CURRENT STATE OF IOWA APPROVED MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- DO NOT STORE EQUIPMENT AND/OR MATERIALS WITHIN PUBLIC RIGHT OF WAY ON STREETS OPEN TO TRAFFIC. PROVIDE AREAS AS NEEDED FOR STORAGE OF **EQUIPMENT AND/OR MATERIALS.**
- BLADING, SHAPING OR MAINTENANCE OF TEMPORARY CONNECTIONS, CROSSINGS DETOURS OR TEMPORARY ACCESSES SHALL BE INCIDENTAL TO THE PROJECT.
- REMOVE AND REPLACE, OR REPAIR ALL ROAD SURFACES AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL CONDITION AND/OR TO THE SATISFACTION OF THE OWNER AND ENGINEER.
- COMPACT ALL TRENCH BACKFILL, UNDER PAVED SURFACES, AND WITHIN RIGHT-OF-WAY ACCORDING TO THE PROJECT GEOTECHNICAL REPORT. SEE **GENERAL NOTE 27.**
- SURFACE RESTORATION INCLUDES THE REMOVAL OF ALL GRANULAR MATERIAL FROM THE TOP 6 INCHES OF TOPSOIL. THIS WORK IS INCIDENTAL TO CONSTRUCTION.
- OWNER HAS FIRST RIGHT OF REFUSAL TO RETAIN ANY MATERIAL REMOVED FROM THE PROJECT AREA. IF DIRECTED, DELIVER ITEMS OR MATERIALS TO OWNER AT LOCATION DESIGNATED BY THE PUBLIC WORKS DEPARTMENT. DISPOSE OF NON-SALVAGEABLE MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- PROVIDE WASTE AREAS OR DISPOSAL SITES FOR WASTE MATERIAL (ASPHALTIC CONCRETE, STEEL OR BROKEN CONCRETE). NO EXTRA PAYMENTS WILL BE MADE FOR MATERIAL HAULED TO THESE SITES. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS. DO NOT PLACE WASTE MATERIAL WITHIN THE RIGHT-OF-WAY. KEEP CONSTRUCTION DEBRIS AND DIRT OFF OF THE ADJACENT PROPERTIES AND STREETS.
- RECONSTRUCT ANY ROAD DITCHES DISTURBED, INCLUDING DITCH GRADES AND CROSS SECTIONS. REPLACE CULVERTS TO ORIGINAL GRADES UNLESS OTHERWISE NOTED. GRADE ALL DITCHES FOR PROPER DRAINAGE. PONDING OF WATER IS NOT ACCEPTABLE. RE-GRADE ANY DITCH WHICH DOES NOT PROPERLY DRAIN. ALL DITCH GRADING IS INCIDENTAL TO CONSTRUCTION.
- DIMENSIONS, STREET LOCATIONS, UTILITIES, AND GRADING ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. REPORT ANY SUCH CHANGES OR CONFLICTS BETWEEN THE PLAN AND FIELD CONDITIONS TO PROJECT ENGINEER IMMEDIATELY
- IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.

- 25. ALL ADA PATHWAYS SHALL HAVE THE FORMS CHECKED BY CONSTRUCTION OBSERVER PRIOR TO POUR, TO ENSURE THEY COMPLY WITH ADAAG REQUIREMENTS.
- THE 2024 STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) STANDARDS APPLY FOR THIS PROJECT.
- 27. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS COMPLETED BY THIELE GEOTECH, INC. DATED AUGUST 16, 2024.
- 28. ENSURE THE FOLLOWING FOR ALL PAINTED AND TAPED PAVEMENT MARKINGS:
- A. ENSURE SUDAS IS FOLLWED FOR REQUIRED SURFACE PREPARATION B. UNIFORM THICKNESS.
- C. LINE WIDTHS AS SPECIFIED, WITH A TOLERANCE OF $\pm \frac{1}{4}$ INCH FOR 4-INCH LINES AND $\pm \frac{1}{2}$ INCH FOR WIDER LINES.
- D. SYMBOLS AND LEGENDS ARE VISUALLY PROPORTIONAL TO CONTRACT
- DOCUMENTS WITH AN OUT-TO-OUT TOLERANCE OF ± 6 INCHES. E. MARKINGS SHALL HAVE SHARP EDGES AND CUTOFFS AT THE ENDS.
- F. LINES PLACED SHALL NOT VARY MORE THAN 1" TOTAL FROM STRINGLINE
- G. LINES PLACED SHALL NOT VERY MORE THAN $\frac{1}{4}$ " FROM STRINGLINE REFERENCE OVER A DISTANCE OF 12 INCHES.
- H. PARKING STALL PAVEMENT MARKINGS SHALL START AND END WITHIN 1/2" FROM LAYOUT REFERENCE.
- 29. ADD ALTERNATE 1 CONSTRUCTION NOTES:
- APPLY PAVIX ON CURED CONCRETE (14-DAY MINIMUM CURE TIME)
- B. PRIOR TO APPLYING PAVIX, REPAIR AND SEAL JOINTS, CRACKS, AND VOIDS GREATER THAN 1/16TH INCH.
- C. POWER WASH ALL SURFACES TO RECEIVE PAVIX.
- D. USE COMPRESSED AIR TO REMOVE SURFACE PARTICLES, DUST, AND WATER JUST PRIOR TO PAVIX APPLICATION.
- E. APPLY PAVIX IN ONE COAT WITH A TARGET COVERAGE RATE OF 150 SF/GAL.
- COVERAGE RATE SHALL NOT EXCEED 200 SF/GAL
- G. DO NOT APPLY PAVIX IF CONCRETE SURFACE TEMPERATURE IS BELOW 40°F (5°C).
- 30. CONTRACTOR TO SCARIFY THE EXISTING SUBGRADE TO A MINIMUM DEPTH OF 12". THEN RECOMPACT ACCORDING TO GEOTECHNICAL REPORT.

UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI / ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE

UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

UTILITY CONTACT INFORMATION

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBER 552403993.

COUNCIL BLUFFS WATER WORKS	712-328-1006
COUNCIL BLUFFS SEWER	712-328-4641
COX COMMUNICATIONS	405-213-5142
CENTURYLINK	918-547-0147
IOWA COMMUNICATIONS NETWORK	515-725-4604
MIDAMERICAN ENERGY	712-366-5669

CONTROL POINTS

IOWA REGIONAL COORDINATE SYSTEM ZONE 6 NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET

- CP1 N=6976630.33 E=16488119.98 Z=1169.52 SET 1/2" REBAR WITH RED "SNYDER CONTROL" CAP (AS SHOWN ON SURVEY)
- CP2 N=6976543.51 E=16488545.12 Z=1184.75 SET 1/2" REBAR WITH RED "SNYDER CONTROL" CAP (AS SHOWN ON SURVEY)
- CP3 N=6976364.73 E=16488540.59 Z=1185.94 SET 1/2" REBAR WITH RED "SNYDER CONTROL" CAP (AS SHOWN ON SURVEY)
- CP4 N=6976377.38 E=16488176.91 Z=1175.33 SET 1/2" REBAR WITH RED "SNYDER CONTROL" CAP (AS SHOWN ON SURVEY)

BENCHMARKS

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A) IARTN DERIVED - US SURVEY FEET

FINISH FLOOR ELEVATION AT CENTER OF GARAGE DOOR

DATE OF SURVEY

JULY 11, 2024

SUMMARY OF QUANTITIES					
ITEM#	DESCRIPTION	QUANTITY	UNIT		
1	MOBILIZATION	1	LS		
2	STABILIZED CONSTRUCTION ENTRANCE	2	EA		
3	SAWCUT EXISTING PAVEMENT	200	LF		
4	SIDEWALK REMOVAL	78	SY		
5	PAVEMENT REMOVAL	2,975	SY		
6	LANDSCAPING REMOVAL	1	LS		
7	FENCE REMOVAL AND REPLACEMENT	1	LS		
8	SILT FENCE	610	LF		
9	INLET PROTECTION	1	EA		
10	STRAW EROSION CONTROL WATTLES	450	LF		
11	SUBGRADE PREPARATION, 12"	3,550	SY		
12	SELECT BACK FILL FOR UNSUITABLE MATERIALS	10	CY		
13	PARKING LOT PAVEMENT 6" PCC	3,015	SY		
14	PCC CURB, 6"	875	LF		
15	SIDEWALK 5" PCC	78	SY		
16	TRENCH DRAIN INSTALLATION	1	EA		
17	SCOUR STOP, 4'X4' MAT	6	EA		
18	LANDSCAPING REPLACEMENT	1	LS		
19	PAVEMENT MARKINGS	825	LF		
20	GRANULAR BACKFILL	5	TON		
21	SEEDING AND MATTING, 5' PERIMETER	0.22	AC		
22	ADA PARKING SIGNAGE & PAVEMENT MARKINGS	1	LS		
ADD ALTERNATE 1 (REFER TO GENERAL NOTE #29, ON SHEET CD02)					
1	PAVIX APPLIED TO ALL NEW CONCRETE	3,093	SY		

LEGEND

FEATURES

Section Corner

ROW Marker

Control Point

Bench Mark

Recorded As

Platted Distance

ROW Rail

1/2" Rebar, Cap # 23198

(Unless Otherwise Noted)

Measured Bearing & Distance

Deed Distance Calculated Distance Minimum Protection Elevation Centerline Section Line 1/4 Section Line 1/4 1/4 Section Line Easement Line	D C MPE	
<u>FEATURES</u>	EXISTING	PROPOSED
Spot Elevation Contour Elevation Fence (Barbed, Field, Hog) Fence (Chain Link) Fence (Wood) Fence (Silt) Tree Line Tree Stump	X 1225.25	X 1225.25 X X //
Deciduous Tree \\ Shrub		
Coniferous Tree \\ Shrub	Manual Company	$+$ $+$ \oplus
Communication		—— C ——
Overhead Communication		OC
Fiber Optic	—— FO(*) —— —	——F0——
Underground Electric	—— E(*) ——	—— E ——— —— OE———
Overhead Electric	—— OE(*) —— ——	—— G ——
Gas Main with Size		———
High Pressure Gas Main with Size		—— w ——
Water Main with Size	S(*)	—— s ——
Sanitary Sewer with Size Duct Bank	— DUCT(*) — —	—— DUCT ——

FOUND

Test Hole Location for SUE w/ID (*) Denotes the survey quality service level for utilities Sanitary Manhole —— ST(*) —— —— Storm Sewer with Size Storm Manhole Single Storm Sewer Intake Double Storm Sewer Intake Fire Hydrant Fire Hydrant on Building Water Main Valve Water Service Valve Guv Anchor Utility Pole with Light Utility Pole with Transformer Yard Light Electric Box Electric Transformer Traffic Sign Communication Pedestal Communication Manhole Communication Handhole Fiber Optic Manhole Fiber Optic Handhole Gas Valve Gas Manhole

Mailbox Sprinkler Head Irrigation Control Valve Soil Boring

Gas Apparatus

Satellite Dish

Elevation

Fence Post or Guard Post

Underground Storage Tank

Above Ground Storage Tank

Section Number **Drawing Number**

Removal Items Bio Retention Systems

SIOWA ONE CALL

(UST)

(AST)

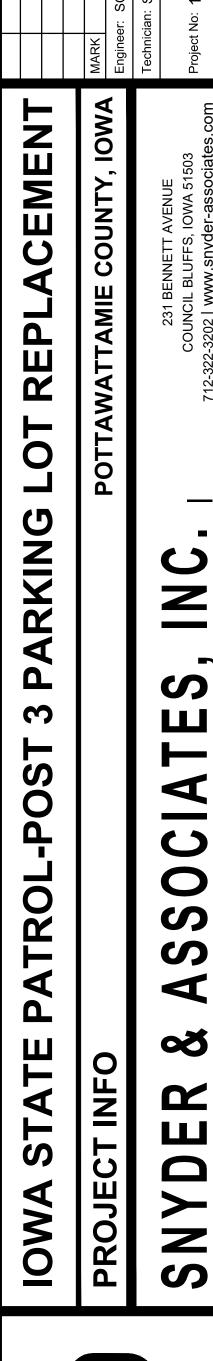
EL: 1225.25

1-800-292-8989 www.lowgonecgll.com



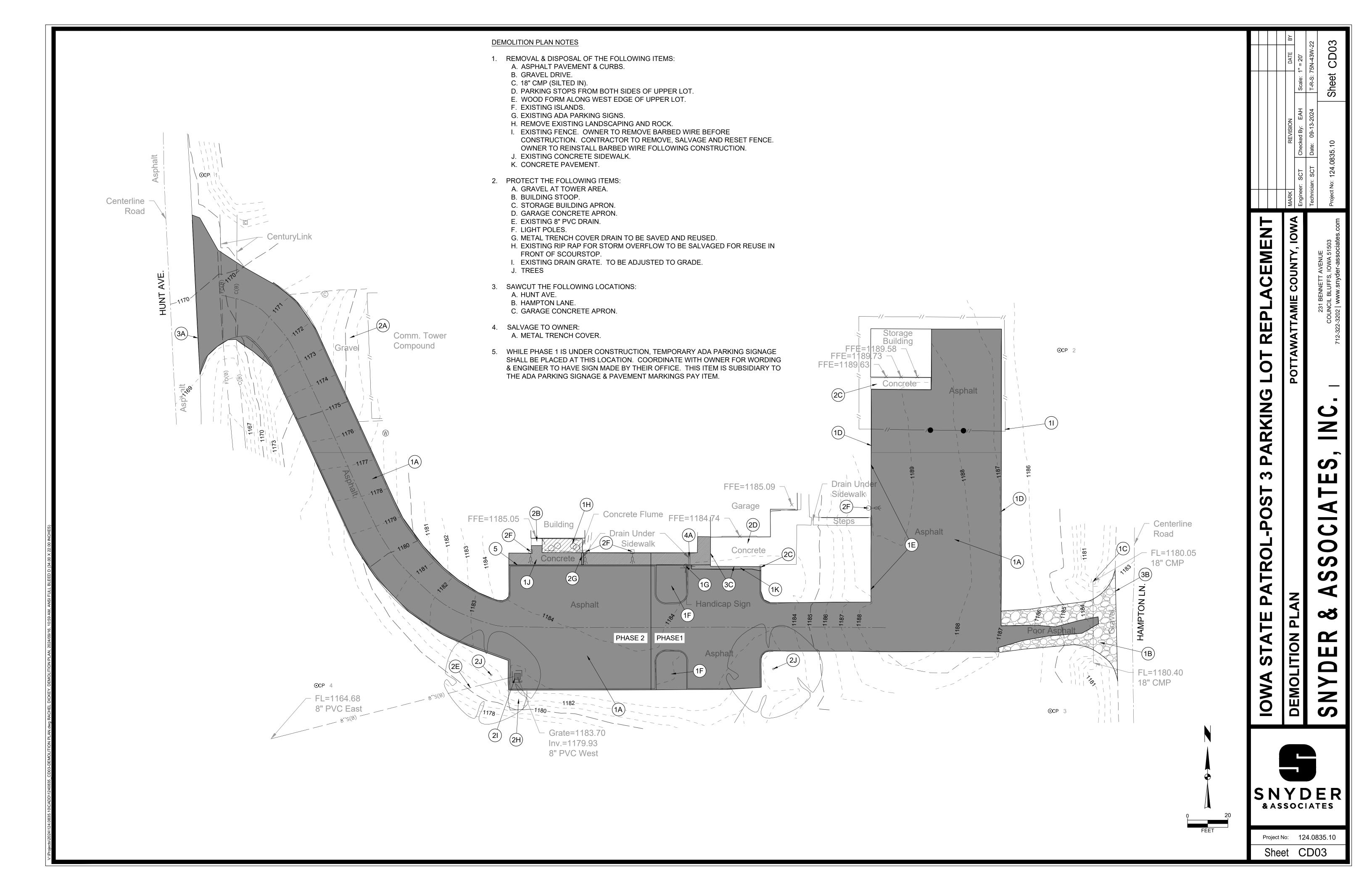
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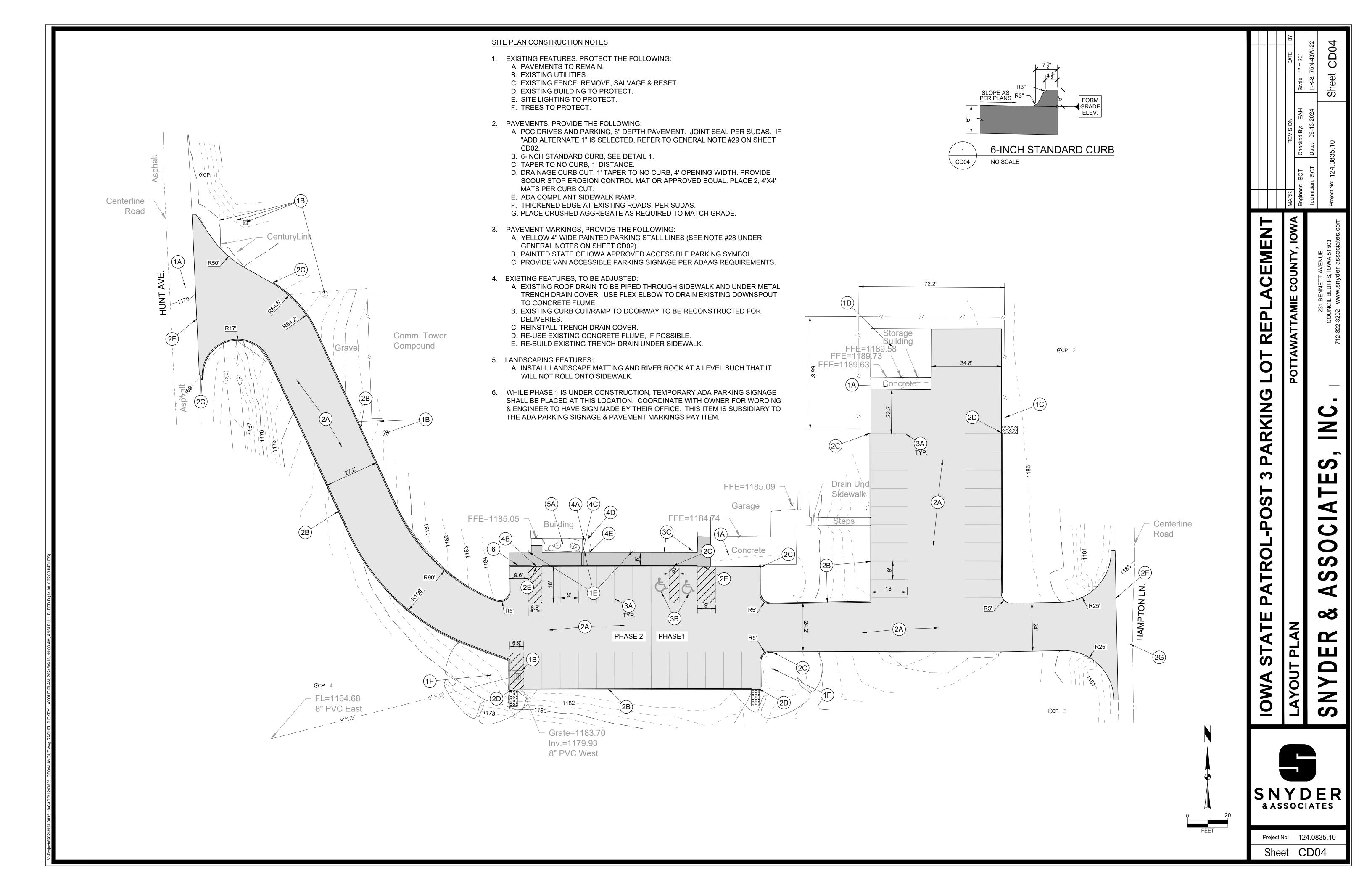
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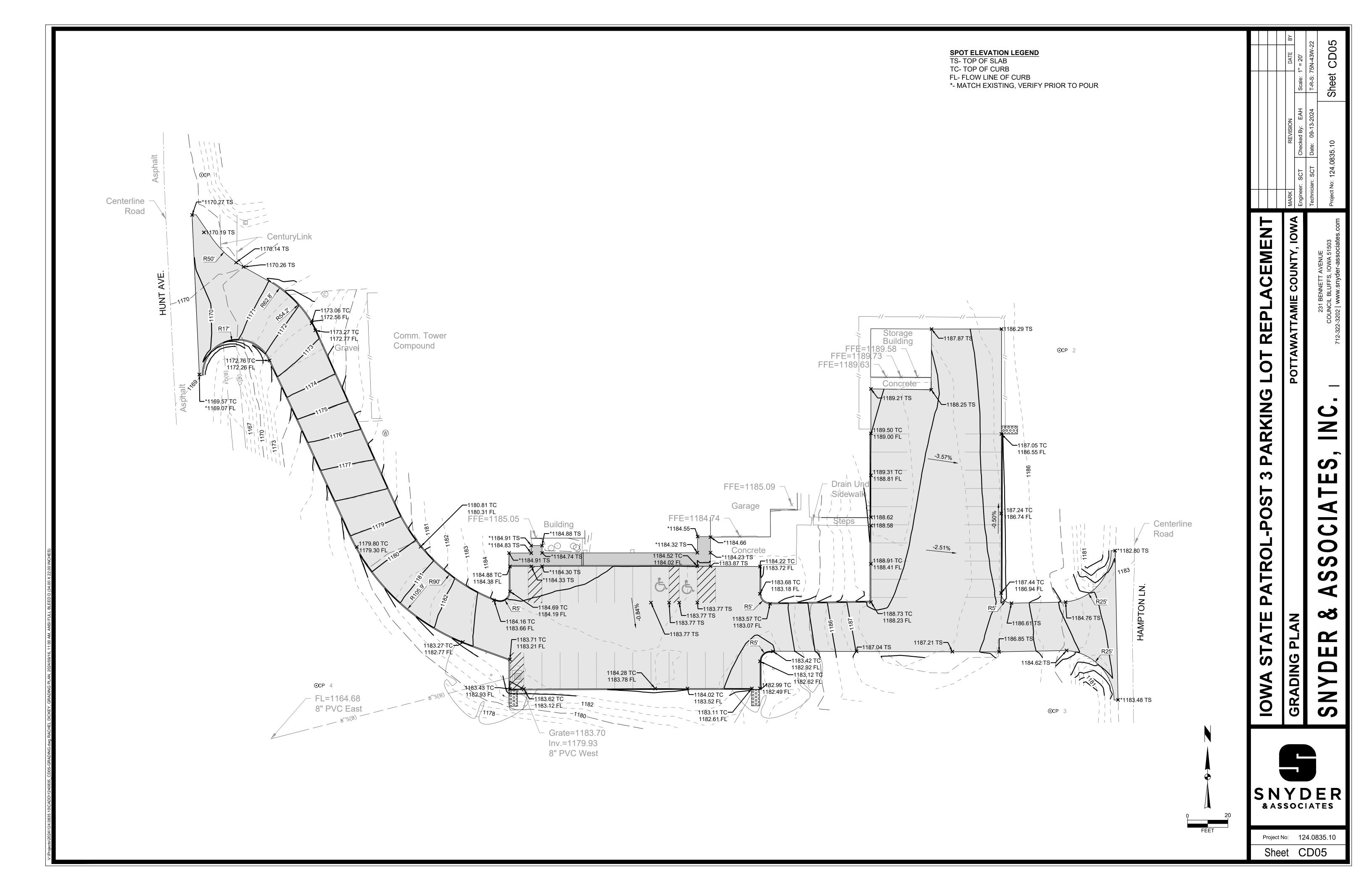


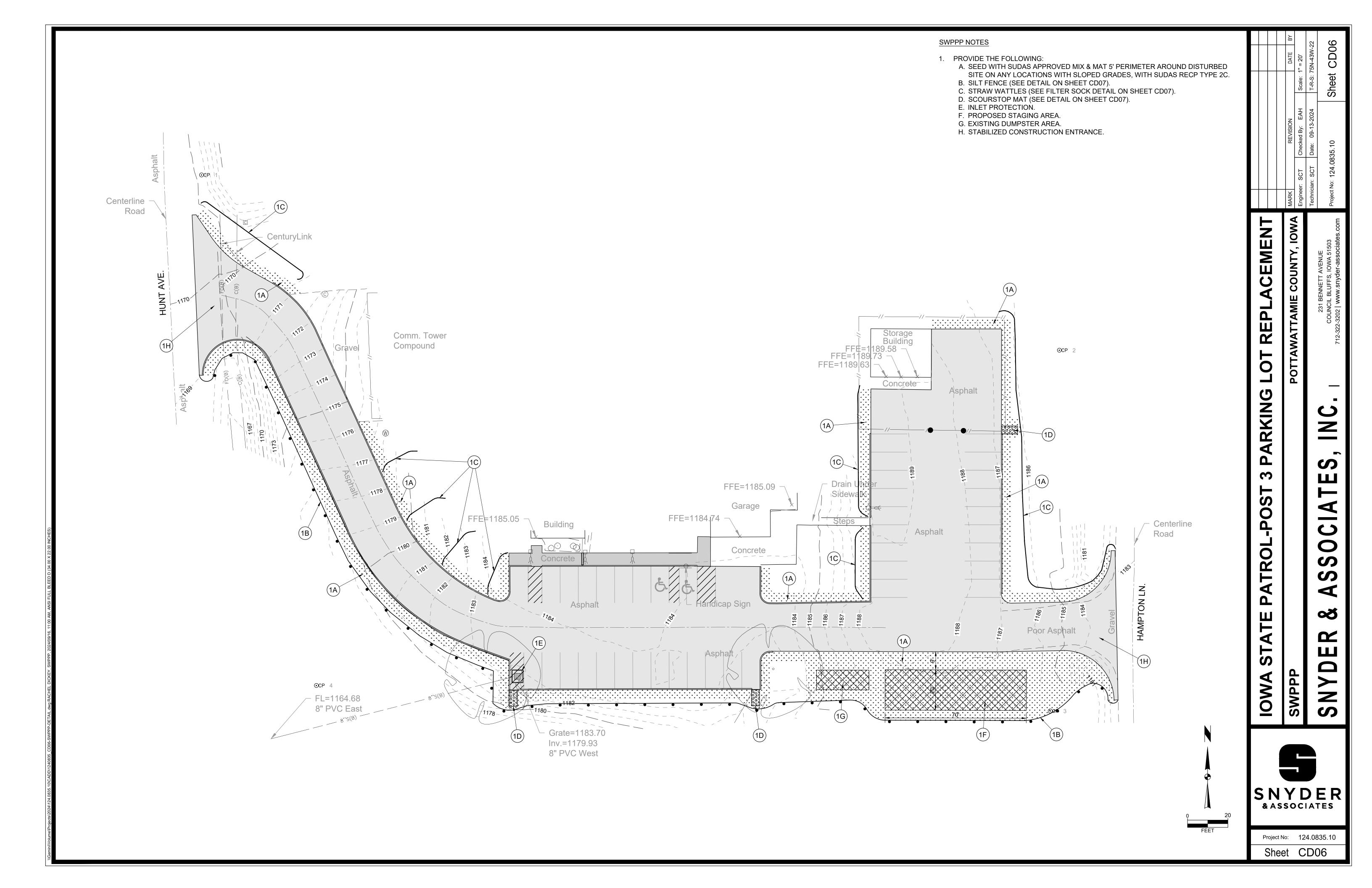
SNYDER & ASSOCIATES

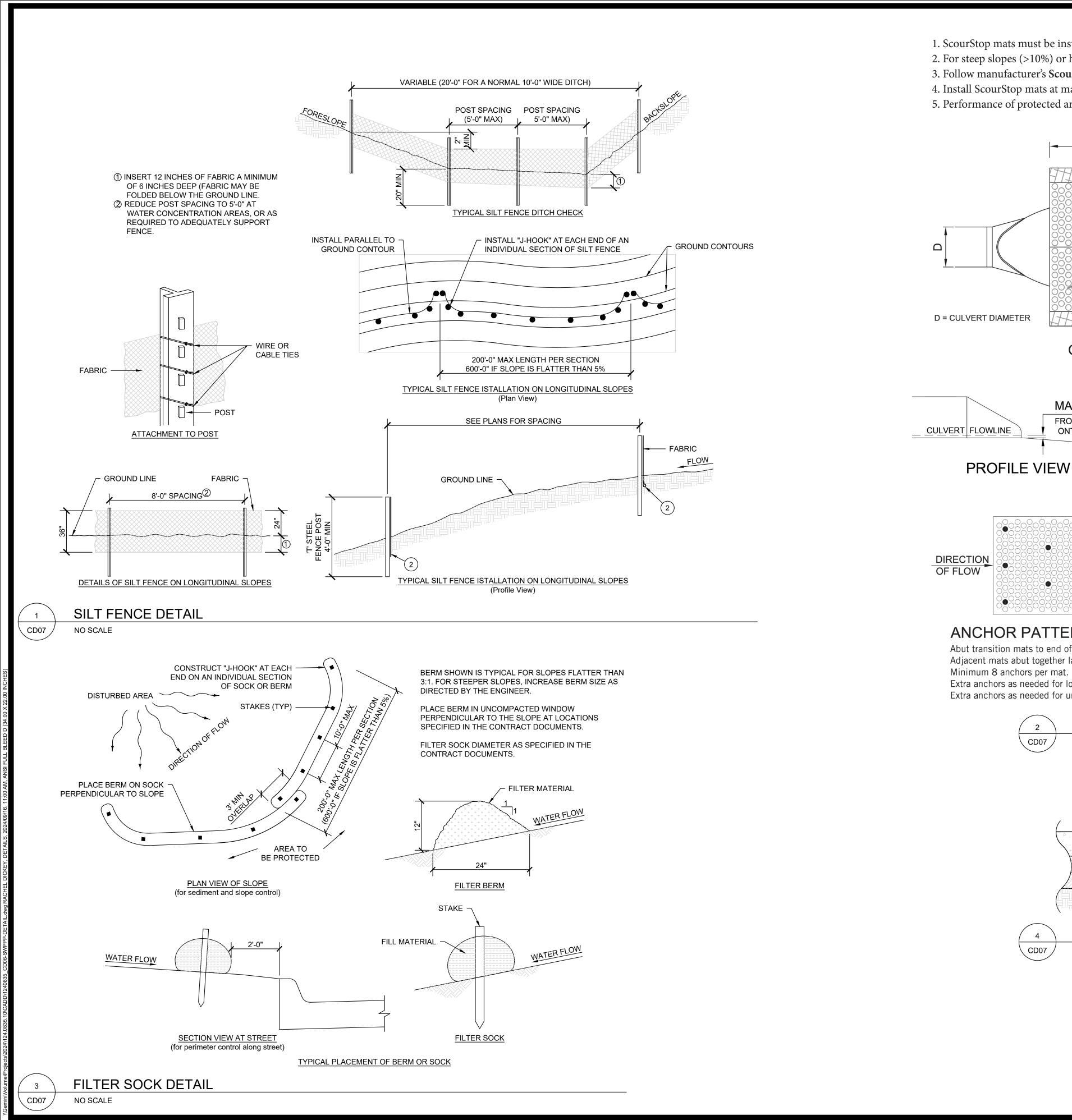
Project No: 124.0835.10 Sheet CD02



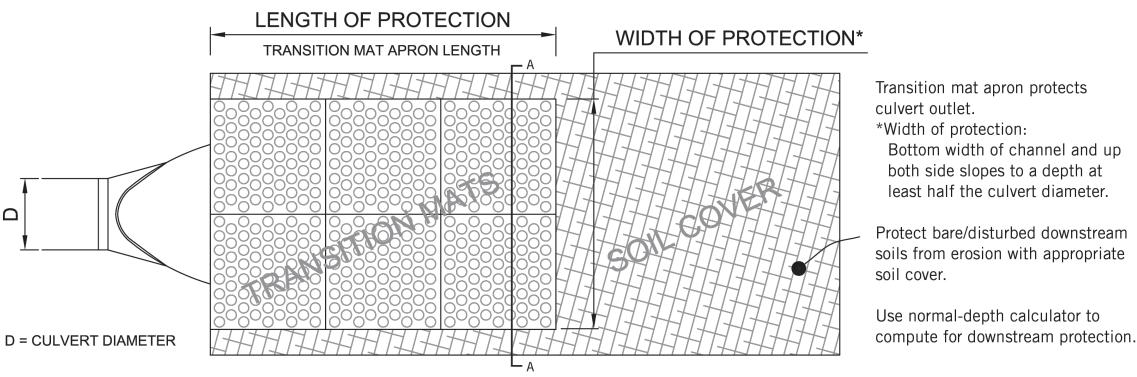




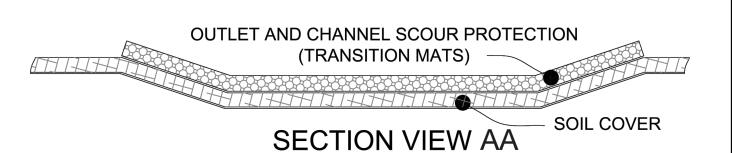




- 1. ScourStop mats must be installed over a soil cover: sod, seeded turf reinforcement mat (TRM), geotextile, or a combination thereof.
- 2. For steep slopes (>10%) or higher velocities (>10 ft/sec), sod is the recommended soil cover.
- 3. Follow manufacturer's ScourStop Installation Guidelines to ensure proper installation.
- 4. Install ScourStop mats at maximum 1-2" below flowline of culvert or culvert apron. (No waterfall impacts onto ScourStop mats.)
- 5. Performance of protected area assumes stable downstream conditions.



CULVERT OUTLET PROTECTION - PLAN VIEW



Transition mat apron protects

Bottom width of channel and up

both side slopes to a depth at

least half the culvert diameter.

Protect bare/disturbed downstream

soils from erosion with appropriate

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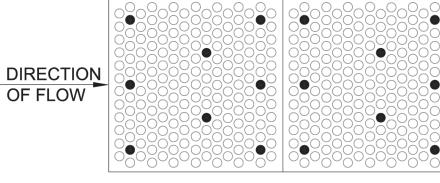
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POTTAWATTAMIE

culvert outlet.

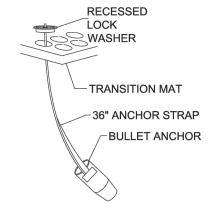
soil cover.

*Width of protection:



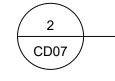
ANCHOR PATTERN

Abut transition mats to end of culvert or culvert apron. Adjacent mats abut together laterally and longitudinally. Minimum 8 anchors per mat. Extra anchors as needed for loose or wet soils. Extra anchors as needed for uneven soil surface.



ANCHOR ILLUSTRATION

Install anchors per ScourStop Installation Guidelines. Minimum depth 24" in compacted, cohesive soil. Minimum depth 30" in loose, sandy, or wet soil. Extra anchors as needed to secure mat tightly over soil cover.



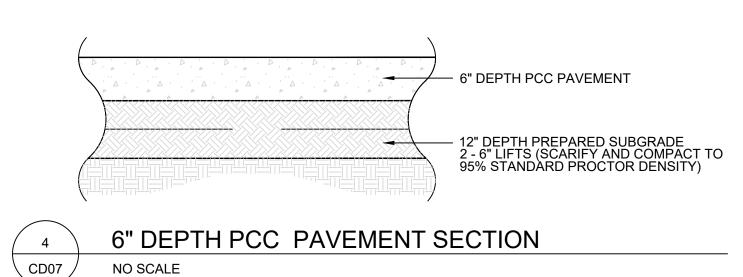
SCOURSTOP DETAIL

NO SCALE

MAX. 1"-2" DROP

FROM CULVERT FLOWLINE

ONTO SCOURSTOP MATS





DETAIL

Project No: 124.0835.10

Sheet CD07