C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION

SECTION 25 -T15N-R1E
GUILFORD TOWNSHIP
HENDRICKS COUNTY, PLAINFIELD, INDIANA

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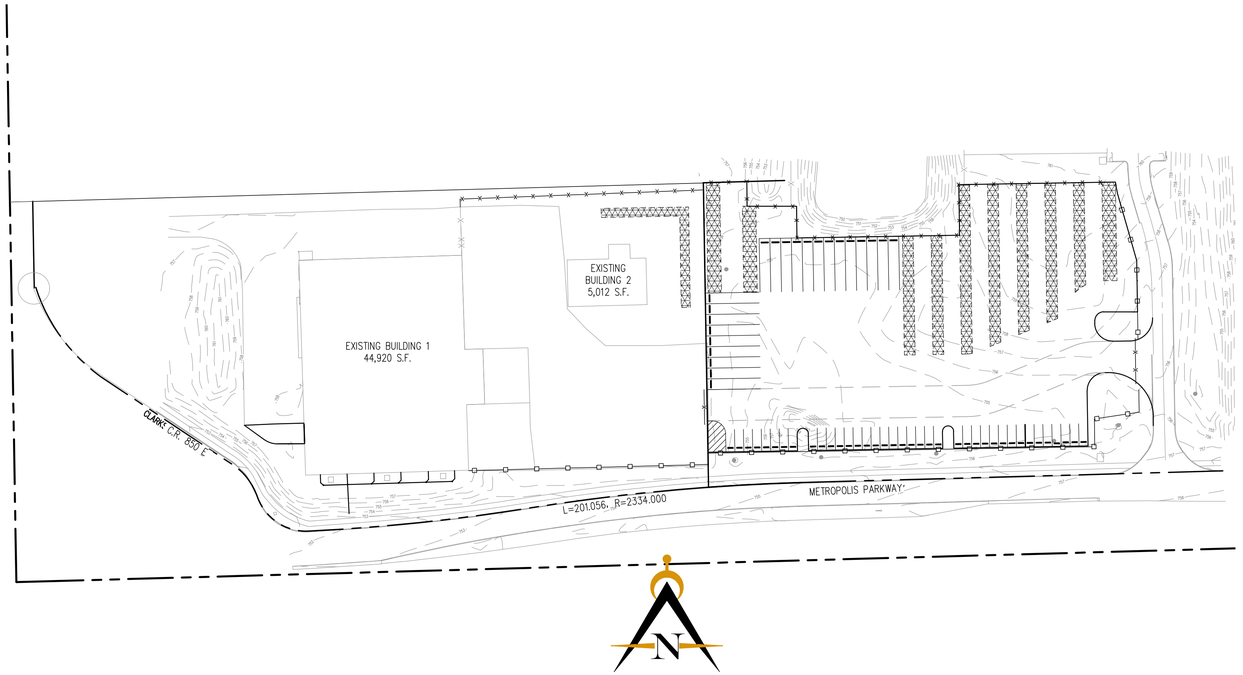

Project Map
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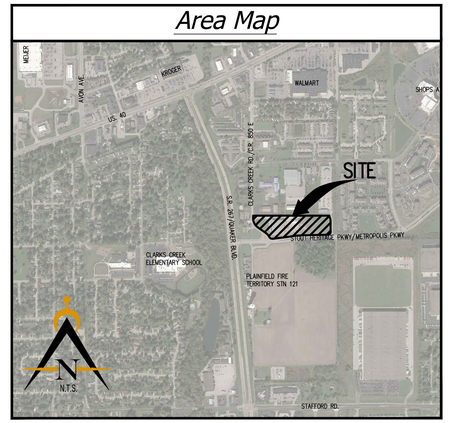

UTILITY PROVIDERS

WATER
Plainfield Water Dept.
986 South Center Street
Plainfield, IN 46168
(317) 839-3490
Attn: Jason Castetter

SEWERS
Plainfield Sewer Dept.
206 West Main St.
Plainfield, IN 46168
(317) 839-2561
Attn: Tim Belcher

GAS
Vectren
1995 East Main Street
Danville, IN 46122
(317) 718-3615
Attn: Bruce Manka

ELECTRIC
Duke Energy
5055 East Main Street
Danville, IN 46122
(317) 745-1006
Attn: Brian Bantley

CABLE TELEVISION
Brighthouse
3030 Roosevelt Ave.
Indianapolis, IN 46218
(317) 632-9077 ext 291
Attn: Design Department

TELEPHONE
AT&T
5858 North College Ave.
Indianapolis, IN 46220
(317) 252-4224
Attn: Wayne Hisyk

ELECTRIC
Duke Energy Asset Protection
2727 Central Ave.
Columbus, IN 47201
(812) 375-2021
Attn: Gary McNamee

UTILITY HOTLINE: 1-800-382-5544 within Indiana 1-800-428-5200 outside Indiana
Note: The nature, size and location of utilities are per plans and locations provided by the respective utility companies together with field observation. The above list constitutes some, if not all, of the utility companies which provide service in the area of, and adjacent to, the subject property, based upon information available through such plans and locations, by incidental visual inspection. All utility companies should be notified prior to any excavation for field location of services and verification of size and nature of services.

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LEGAL DESCRIPTION:

LOT # 2 OF PLAINFIELD WAREHOUSE DISTRICT PER THE PLAT THEREOF RECORDED AS INSTRUMENT NUMBER 2006000027292 IN THE OFFICE OF THE RECORDER OF SAID HENDRICKS COUNTY.

Developer:

CSU Inc
UTILITY CONTRACTOR

Contact: Brian Paul
314-972-0802

3919 Clarks Creek Rd.
Plainfield, IN 46168

Engineer:

Innovative
ENGINEERING & CONSULTING

3961 Perry Boulevard
Ph. 317-769-2916
Contact: Jerry Kittle

Whitestown, IN 46075
www.innovativeeci.com
jkittle@innovativeeci.com

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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
COVER SHEET

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE:	DRAWN BY:
07/09/2020	ALR
ISSUED:	CHECKED BY:
JOB NUMBER: 19111	
SHEET # C100	

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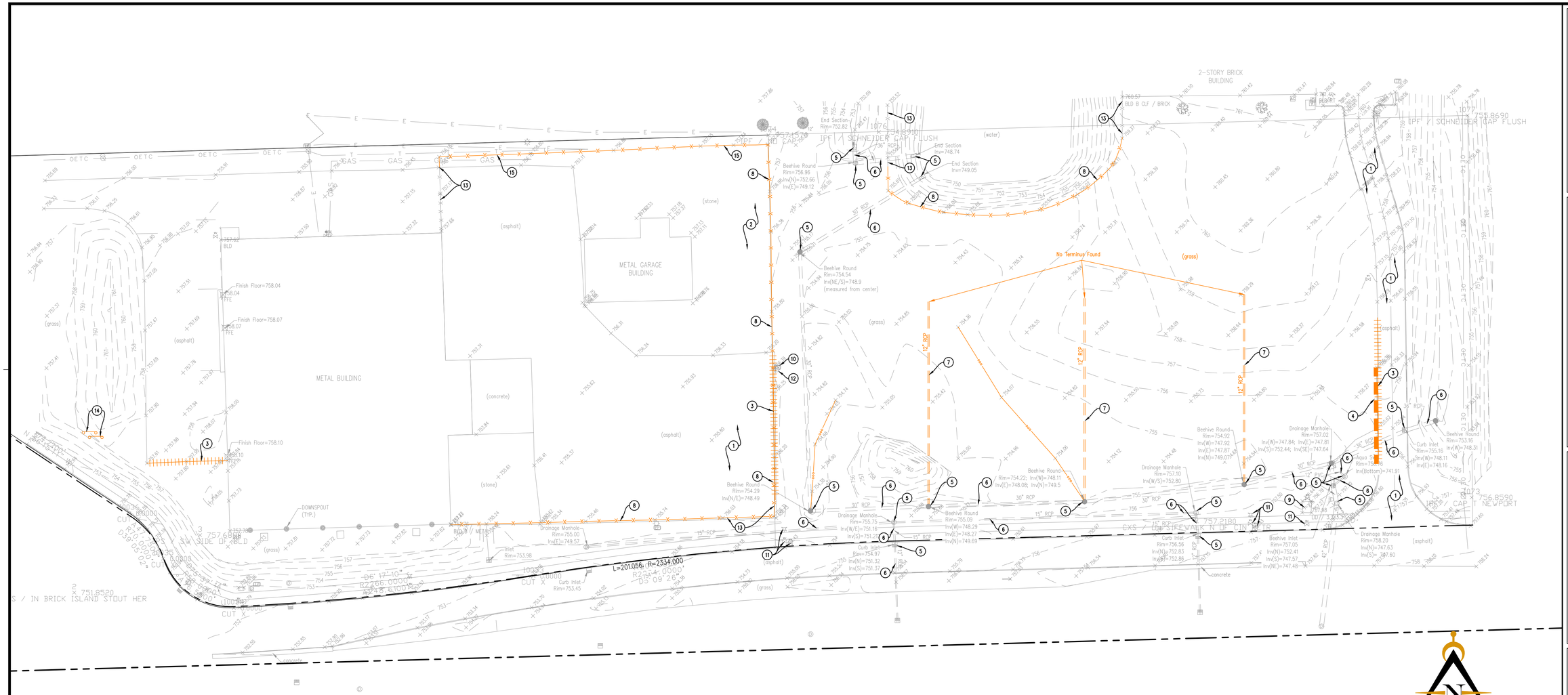

KEYNOTES

1. EXISTING ASPHALT TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION
2. EXISTING STONE PAVEMENT TO REMAIN THROUGHOUT DURATION OF CONSTRUCTION
3. SAWCUT PAVEMENT FULL DEPTH, MILL SURFACE PER 3/C801
4. CURB TO BE REMOVED
5. STORM STRUCTURE TO BE PROTECTED AND REMAIN IN PLACE
6. STORM PIPE TO BE PROTECTED AND REMAIN IN PLACE
7. STORM PIPE TO BE REMOVED
8. EXISTING FENCE TO BE REMOVED.
9. WATER VAULT TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
10. ELECTRICAL PEDESTAL TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
11. UTILITY TO BE PROTECTED THROUGHOUT CONSTRUCTION
12. LIGHT POLE TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
13. FENCE TO BE PROTECTED AND REMAIN IN PLACE
14. EXISTING SIGN TO BE REMOVED AND RETURNED TO OWNER
15. REMOVE AND REPLACE FENCE ONLY. POSTS TO REMAIN IN PLACE.

GENERAL NOTES

1. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL CODES, OBTAIN ALL PERMITS, AND GIVE NOTICES REQUIRED FOR EXECUTION OF THE WORK.
2. ALL MATERIALS BEING REMOVED AND NOT RELOCATED UNDER THE NEW CONSTRUCTION, INCLUDING TREES, SHRUBS, SIGNS, UTILITIES, UTILITY STRUCTURES, ETC., SHALL BE FIRST OFFERED TO THE OWNER'S REPRESENTATIVE AND, IF NOT ACCEPTED, SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
4. THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
5. IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED, SAW CUT TO PROVIDE A CLEAN EDGE. COORDINATE EXTENT OF PAVEMENT DEMOLITION WITH THE LIMIT OF NEW IMPROVEMENTS ON THE SITE LAYOUT PLAN.
6. THE CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH THE OWNER'S REPRESENTATIVE, ADJACENT PROPERTY LANDOWNERS, UTILITY REGULATIONS AND LOCAL AUTHORITIES, WHERE APPROPRIATE, PRIOR TO BEGINNING WORK. DISRUPTION OF THE EXISTING UTILITIES SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY UTILITY REGULATIONS AND LOCAL AUTHORITIES.
7. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
9. THE CONTRACTOR SHALL CALL THE INDIANA ONE CALL SYSTEM, HOLEY MOLEY, OR OTHER REQUIRED UTILITY LOCATION COMPANIES 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
10. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS.
11. EXISTING TREES TO BE PRESERVED ARE TO BE APPROPRIATELY BARRICADED PRIOR TO CONSTRUCTION.
12. ALL STORM PIPE IS TO REMAIN IN PLACE. ADJUST STRUCTURE T.C.'s AS SHOWN.

DEMOLITION LEGEND

- PAVEMENT TO BE SAWCUT
- EXISTING CURB TO BE REMOVED

GRAPHIC SCALE
40' 0 20' 40'
(IN FEET)
1 inch = 40 ft.

LEGEND

—o— / —o-o—	SIGN / TWO POST SIGN
OHE	OVERHEAD ELECTRIC
UP	UTILITY POLE
FENCE	FENCE
TREE ROW	TREE ROW
(M)	MEASURED
(D)	DEED
PL	PROPERTY LINE
REBAR	REBAR
TREE (CONIFEROUS)	TREE (CONIFEROUS)
BUSH	BUSH
GAS LINE	GAS LINE
GAS MARKER	GAS MARKER
WATER METER	WATER METER
TELEPHONE PEDESTAL	TELEPHONE PEDESTAL
WATER VALVE	WATER VALVE
P.O.B.	POINT OF BEGINNING
C.M.P.	CORRUGATED METAL PIPE
H.D.P.E.	HIGH-DENSITY POLYETHYLENE
V.C.P.	VITRIFIED CLAY PIPE
FLAT GRATE INLET	FLAT GRATE INLET
PROPERTY LINE	PROPERTY LINE

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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana

EXISTING CONDITIONS AND DEMOLITION PLAN

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE ISSUED: 07/09/2020
DRAWN BY:
CHECKED BY:
JOB NUMBER: 19111
SHEET # C101

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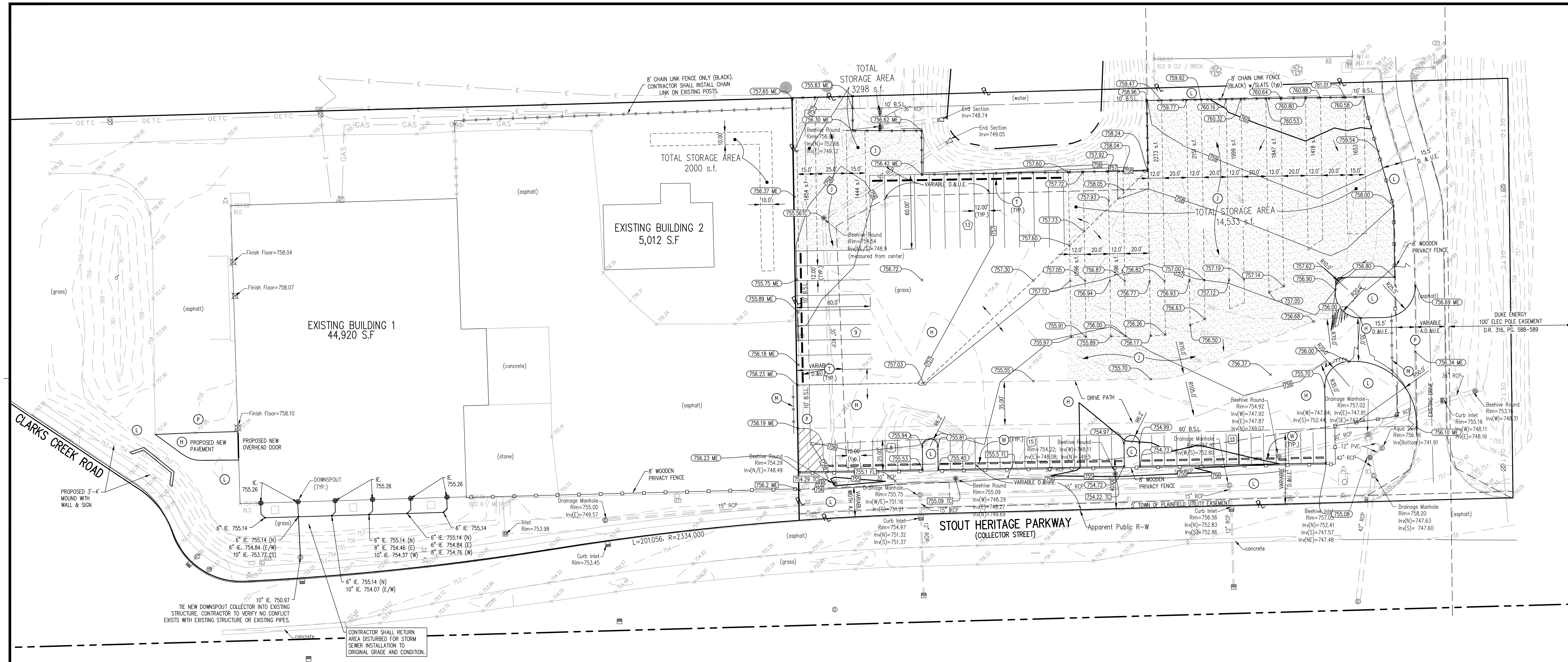


GENERAL NOTES

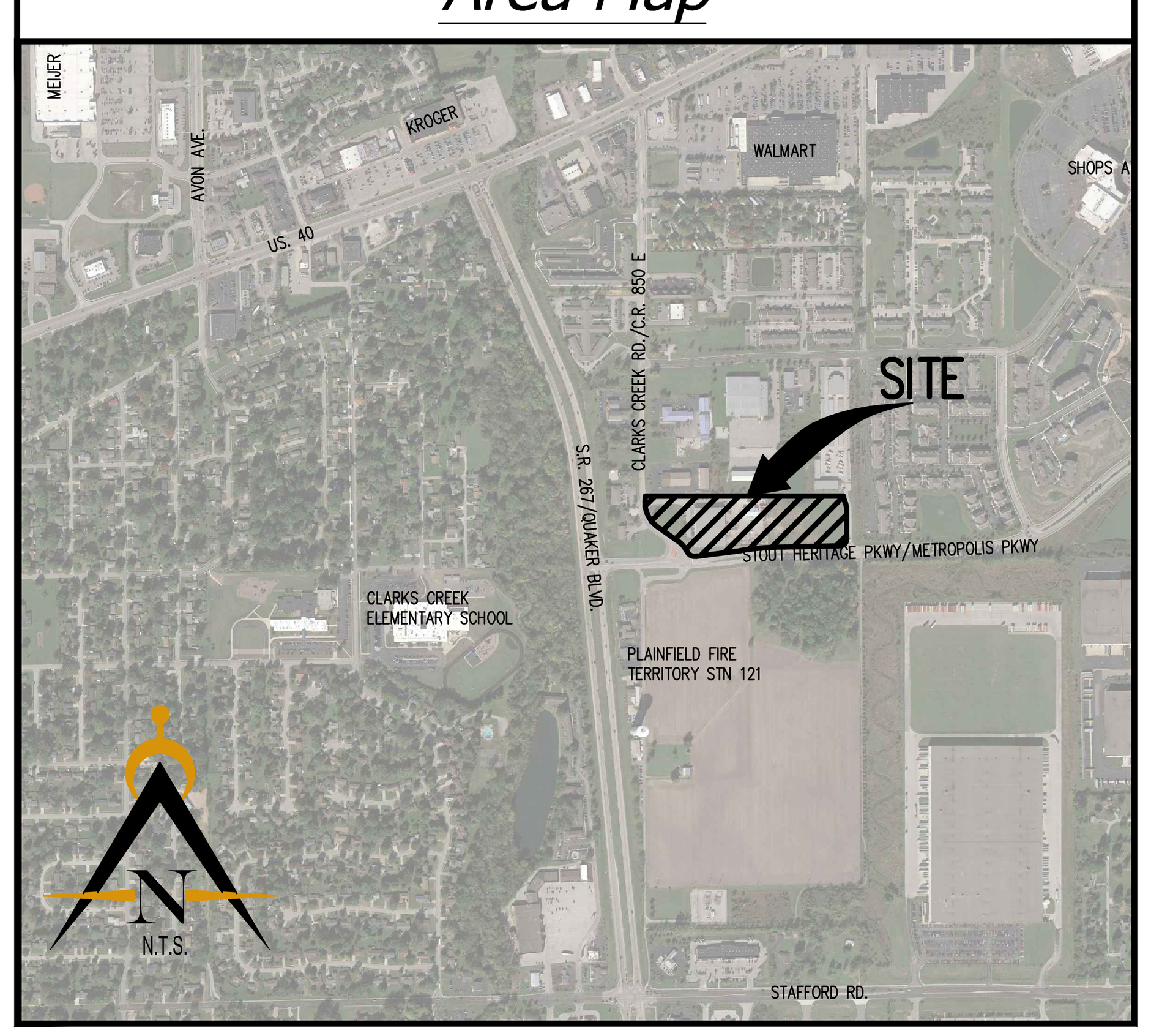
1. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS THAT PERTAIN TO THEIR PHASE OF WORK PRIOR TO START OF WORK.IT SHALL ALSO BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO CONTACT THE OWNERS OF THE UTILITIES FOR PROPER STAKE LOCATIONS PRIOR TO START OF WORK.
2. IF ANY CHANGES, OMISSIONS OR ERRORS ARE FOUND ON THESE PLANS OR IN THE FIELD THE SUBCONTRACTOR SHALL NOTIFY, IN WRITING, THE OWNER AND ENGINEER BEFORE WORK IS STARTED OR RESUMED.
3. VERIFY SIGN LOCATION AND SIGN REQUIREMENTS WITH LOCAL GOVERNING AUTHORITIES.
4. BEARING AND DISTANCES SHOWN ARE FOR REFERENCE ONLY
5. SEE TITLE SHEET FOR LEGAL DESCRIPTION AND BENCHMARK INFORMATION
6. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO PERFORMED IN COMPLIANCE WITH ALL APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
7. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION SHALL CONFORM TO APPLICABLE STATE AND LOCAL STANDARDS.
8. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS(IF AVAILABLE).
9. SEE PHOTOMETRIC PLAN FOR LIGHT LOCATIONS AND TYPE.
10. DO NOT SCALE FROM THESE PLANS FOR SURVEY LOCATIONS.
11. STANDARD SPECIFICATIONS FOR THE TOWN OF PLAINFIELD, INDIANA SHALL APPLY FOR ALL STORM SEWERS.
12. EXISTING UTILITIES SHOWN ARE PER INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO ANY EXCAVATION FOR FIELD LOCATION SERVICES.
13. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO PERFORMED IN COMPLIANCE WITH ALL APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
14. ALL FILL AREA SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY (ASTM D-1557).
15. ALL POINT OF CONNECTION OF PROPOSED STORM SEWER ARE TO BE VERIFIED FROM A KNOW BENCHMARK PRIOR TO CONSTRUCTION.
16. ALL GRADES SHALL MEET EXISTING GRADE AT THE PROPERTY LINE
17. ANY DISCREPANCIES WITH INFORMATION PROVIDED IN THESE CONSTRUCTION DOCUMENTS IS TO BE REPORTED TO THE ENGINEER AND OWNER IMMEDIATELY.
18. ANY FIELD TILES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE INCORPORATED INTO THE PROPOSED STORM SEWER SYSTEM AS SHOWN WITHIN THESE PLANS.
19. CONTACT ENGINEER PRIOR TO RE-ROUTING OF ANY FIELD TILES.
20. THE CONTRACTOR SHALL CONFIRM ALL EARTHWORK QUANTIFIES PRIOR TO START OF CONSTRUCTION. IF ANY EXCESS OR SHORTAGE OF EARTH IS ENCOUNTERED, THE CONTRACTOR SHALL CONFIRM WITH THE OWNER AND ENGINEER THE REQUIREMENTS FOR STOCKPILING, REMOVAL OR IMPORTING OF EARTH.

LEGEND

- Existing Storm Sewer
- Existing Contour (000)
- Existing Spot Elevation (× 788.70)
- New Pavement Grade (000.00)
- All Other Finish Grades (000.00)
- Match Existing Grades (M.E.)
- Surface Flow Arrow
- Existing Underground Gas Main (GAS)
- Existing Overhead Telephone Cable (OETC)
- Existing Water Main (WTR)
- Existing Electric (E)
- Existing Flowline
- Existing Fence
- Proposed 8' Chainlink Fence — 7/C801
- Proposed 8' Wooden Privacy Fence — 9/C801
- Existing Telephone (E)
- Utility & Drainage Esmt.
- Building Setback Line
- Existing Fire Hydrant
- Existing Water Valve
- Storage Area
- (H) Heavy Duty Asphalt Pavement Section — 2/C801
- (J) Standard Duty Asphalt Pavement Section — 1/C801
- (L) Landscape Area
- (M) Sliding Gate — 8/C801
- (P) Pavement Tie-In — 3/C801
- (T) Heavy Duty Pre-cast Wheel Stop — 4/C801
- (W) Pre-cast Wheel Stop — 5/C801
- (0) 12'x60' Semi Parking Spaces (w/white paint)
- (0) 10'x25' Truck Parking Spaces (w/white paint)
- Existing Light Pole Base
- New Light Pole Base — 6/C801
- R-W Right-of Way
- D.&U.E. Drainage & Utility Easement
- B.S.L. Building Setback Line
- s.f. Square Feet
- RCP Reinforced Concrete Pipe
- ℄ Property Line

GRAPHIC SCALE
40' 0 20' 40'
(IN FEET)
1 inch = 40 ft.

Area Map



PARKING SUMMARY:	
EXISTING STANDARD SPACES:	59
STANDARD PARKING:	38
TOTAL:	97
EXISTING TRUCK / TRAILER PARKING:	6
TRUCK / TRAILER PARKING:	22
TOTAL:	28

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Whitestown, IN 46075
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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
DEVELOPMENT PLAN

PRELIMINARY PENDING AGENCY APPROVAL
DATE: 04/10/2018

DATE: 07/09/2020	DRAWN BY: kwk
ISSUED:	CHECKED BY:

JOB NUMBER: 19111
SHEET # C102

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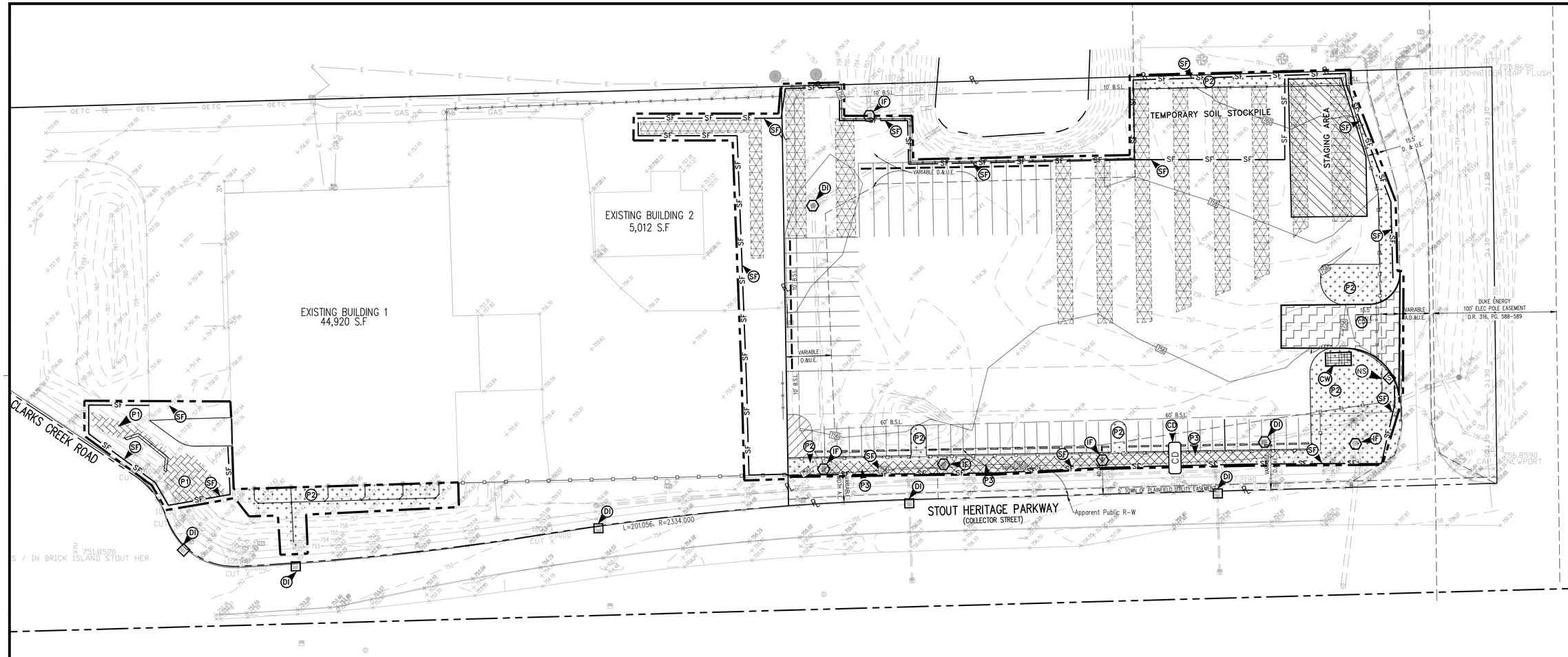

CONSTRUCTION TIMETABLE

BEGIN EROSION CONTROL PRACTICE INSTALLATION: DECEMBER 2020
PROJECT CONSTRUCTION START DATE: DECEMBER 2020
PROJECT COMPLETION DATE: DECEMBER 2021

PROJECT NARRATIVE

THE PROPOSED PROJECT CONSIST OF A SMALL PARKING LOT ADDITION AS WELL AS SOME GRADING FOR A MOUND WITH A SIGN AND RETAINING WALL. ALSO, THIS PROJECT CONSISTS OF AN EXPANSION OF STORAGE AREA AND PARKING.

GENERAL NOTE

THE PROVIDED CONSTRUCTION SEQUENCE IS INTENDED AS A GENERAL GUIDELINE ONLY; THE ACTUAL CONSTRUCTION SEQUENCE MAY BE VARIED BY THE CONTRACTOR AS REQUIRED BY FIELD CONDITIONS, PROVIDED FULL CONFORMANCE WITH THE INTENT OF 327 IAC 15-5 (RULE 5), GENERAL PERMIT FOR CONSTRUCTION ACTIVITY STORM WATER RUNOFF CONTROL, IS ACHIEVED. CONTRACTOR SHALL NOTIFY INNOVATIVE ENGINEERING & CONSULTING, INC, AND THE TOWN OF PLAINFIELD PLANNING STAFF PRIOR TO ANY CHANGES IN THE GENERAL CONSTRUCTION SEQUENCE.

THE CONTRACTOR, OWNER AND/OR THEIR DESIGNATED AGENTS SHALL ASSUME FULL RESPONSIBILITY FOR ENSURING SITE CONSTRUCTION ON THIS PROJECT IS COMPLETED IN FULL CONFORMANCE WITH THE REQUIREMENTS OF 327 IAC 15-5 (RULE 5).

EROSION CONTROL NOTES

1. INSTALL SILT FENCE PERIMETER SEDIMENT CONTROL BARRIER PRIOR TO BEGINNING ON-SITE EARTH MOVING ACTIVITIES.
2. INSPECT PERIMETER SILT FENCE PERIODICALLY AND AFTER EACH RAINFALL AND REPAIR AND REPLACE AS REQUIRED. SEDIMENT DEPOSITS TO BE REMOVED WHEN AT A MAXIMUM OF ONE-THIRD OF FENCE HEIGHT.
3. SILT FENCE PERIMETER SEDIMENT BARRIER TO REMAIN IN PLACE UNTIL SUCH TIME AS ALL DISTURBED AREAS OF SITE HAVE BEEN STABILIZED.
4. TRACKING OF SEDIMENT ONTO ABUTTING ROAD SYSTEM SHALL BE PREVENTED TO THE GREATEST EXTENT POSSIBLE. VEHICLES SHALL BE CLEANED OF MUD AND DEBRIS AS REQUIRED TO PREVENT TRACKING. MUD AND DEBRIS WHICH IS TRACKED ONTO THE ROAD SYSTEM SHALL BE REMOVED BY SCRAPING AND/OR SWEEPING AND PLACED IN A PROTECTED AREA.
5. ANY DISTURBED AREA THAT IS PLANNED TO BE LEFT UNCHANGED FOR MORE THAN 15 DAYS IS TO BE TEMPORARY SEEDED AND MULCHED.
6. NO SEDIMENT BARRIERS ARE TO BE REMOVED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY STATE, COUNTY OR CITY OFFICIALS IF FIELD CONDITIONS WARRANT.
8. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE IDNR INDIANA STORM WATER QUALITY MANUAL AND THE SCS FIELD OFFICE TECHNICAL GUIDE.
9. ALL SOIL REMOVED FROM THE SITE IS TO BE TAKEN TO A PERMITTED SITE WITH ADEQUATE EROSION CONTROL MEASURES IN PLACE.

EROSION CONTROL SEQUENCE

1. CONTACT IDEM AT (317) 233-1864 & HENDRICKS COUNTY SOIL AND WATER CONSERVATION SERVICE FORTY-EIGHT HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
2. POST CONTRACTOR AND OWNER INFORMATION AT SITE ENTRANCE.
3. BEGIN SELF MONITORING PROGRAM.
4. CALL THE INDIANA UNDERGROUND PLANT PROTECTION SYSTEMS, INC. AT 811 OR 1-800-382-5544 TO CHECK THE LOCATION OF EXISTING UTILITIES. THEY SHOULD BE NOTIFIED TWO WORKING DAYS BEFORE CONSTRUCTION TAKES PLACE.
5. INSTALL SILT FENCE & INLET PROTECTION AROUND EXISTING STORM SEWER INLETS AS SHOWN ON THIS PLAN AND DETAIL SHEETS. NOTIFY ENGINEER ONCE SILT FENCE HAS BEEN INSTALLED.
6. BEGIN DEMOLITION
7. ROUGH GRADE PARKING AREA. INSTALL SEDIMENT CONTROL BARRIERS AND EROSION CONTROL BLANKETS PER THIS PLAN AND DETAIL SHEETS.
8. COMPLETE PARKING LOT IMPROVEMENTS AND ROUGH GRADING OF THE REMAINING SITE.
9. FINISH GRADE REMAINDER OF SITE.
10. INSTALL PERMANENT SEEDING PER THIS PLAN AND SEASONAL SOIL PROTECTION CHART.
11. TEMPORARY SEED AND MULCH ANY DISTURBED AREA THAT IS PLANNED TO REMAIN UNCHANGED FOR A PERIOD OF MORE THAN 15 DAYS.

LEGEND

- Existing Storm Sewer
- 000 Existing Contour
- × 788.70 Existing Spot Elevation
- 000.00 New Pavement Grade
- 000.00 All Other Finish Grades
- M.E. Match Existing Grades
- Surface Flow Arrow
- GAS Existing Underground Gas Main
- OETC Existing Overhead Telephone Cable
- WTR Existing Water Main
- E Existing Electric
- Existing Flowline
- Existing Fence
- Proposed Fence
- T Existing Telephone
- Utility & Drainage Esmt.
- Building Setback Line
- Existing Fire Hydrant
- Existing Water Valve
- Existing Light Pole Base
- New Light Pole Base
- Storage Area
- R-W Right-of Way
- D.&U.E. Drainage & Utility Easement
- B.S.L. Building Setback Line
- s.f. Square Feet
- Property Line

EROSION CONTROL LEGEND

- CONSTRUCTION LIMITS
- SF SILT FENCE SEDIMENT BARRIER (SF)
- CONCRETE WASHOUT (CW)
- SOD (P1)
- PERMANENT SEEDING WITH STRAW MULCH AT 1.5-2 TONS/ACRE (P2)
- PERMANENT SEEDING WITH EROSION CONTROL BLANKETS (NORTH AMERICAN GREEN SC-150 OR EQUAL) (P3)
- TEMPORARY CONSTRUCTION DRIVE (USE EXISTING ASPHALT DRIVE TO ACCESS SITE) (CD)
- NOTIFICATION SIGN (NS)
- CD CHECK DAM (CD)
- DROP INLET PROTECTION (DI)
- INLET PROTECTION FENCE (IF)

GRAPHIC SCALE
40' 0 20' 40'
(IN FEET)
1 inch = 40 ft.

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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
Erosion Control Plan

PRELIMINARY
PENDING
AGENCY
APPROVAL
DATE:

DATE:	DRAWN BY:
07/09/2020	
ISSUED:	CHECKED BY:

JOB NUMBER: 19111
SHEET # C103

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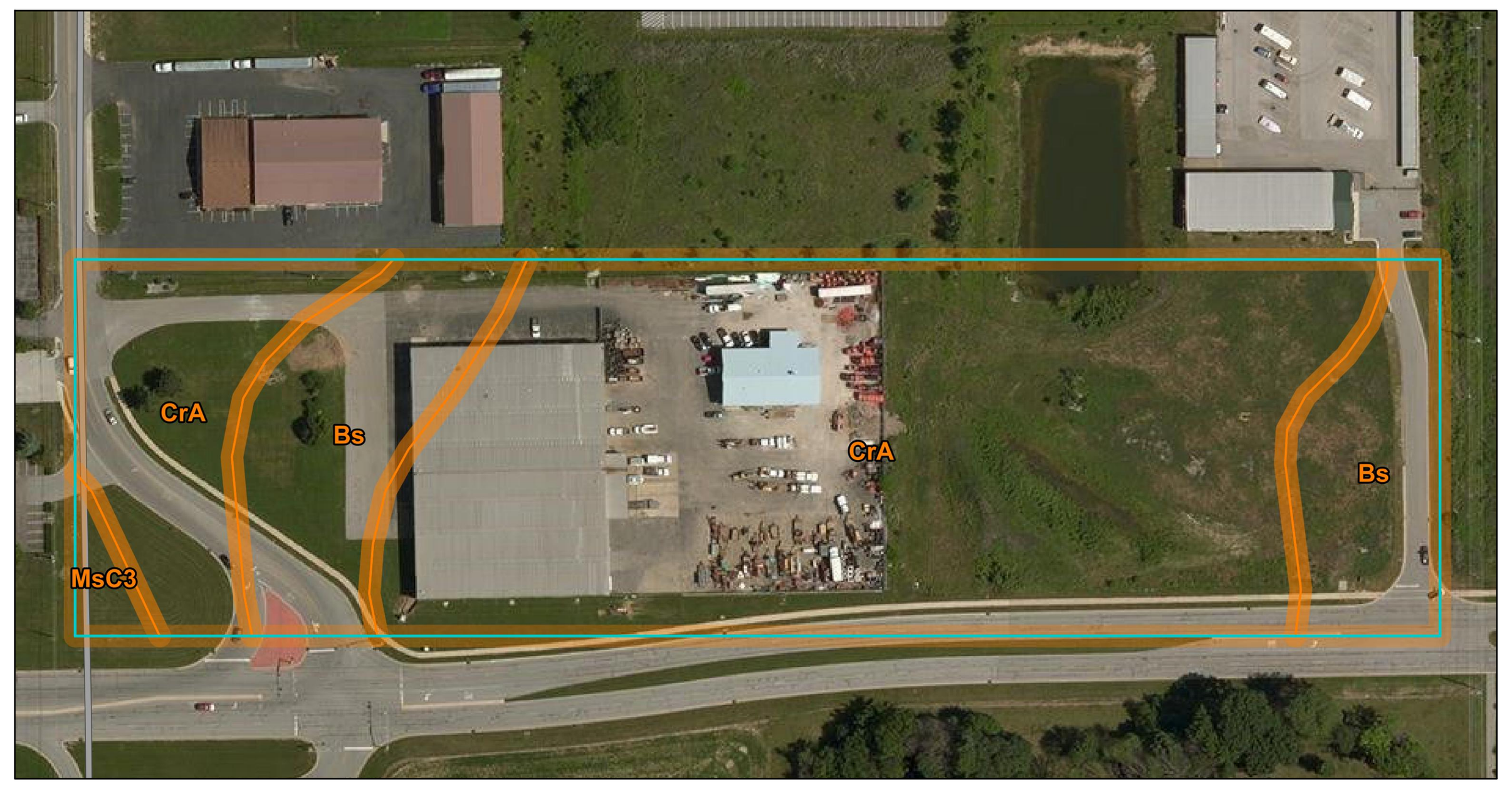
EROSION CONTROL SCHEDULE

EROSION CONTROL MEASURE	✱ MAINTENANCE	INSTALLATION SEQUENCE
STONE ENTRANCE	PRIOR TO CLEARING AND GRADING	AS NEEDED
SILT FENCE	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
EXISTING INLET PROTECTION	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TREE PROTECTION	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TEMPORARY DIVERSIONS	ALONG WITH ROUGH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TEMPORARY SEEDING	AFTER ROUGH GRADING	WATER AS NEEDED
PERMANENT SEEDING	AFTER FINISH GRADING	WATER AS NEEDED
EROSION CONTROL MATTING	AFTER FINISH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
STRAW BALES	AFTER FINISH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
INLET PROTECTION	AFTER EACH INLET IS PLACED	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
SEED, SOD & LANDSCAPE AROUND UNITS FINISHED	AFTER FINISHED GRADING AROUND FINISHED UNITS	WATER AS NEEDED
REMOVAL OF STRAW BALES	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A
REMOVAL OF INLET PROTECTION	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A
REMOVAL OF SILT FENCE	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A

✱ – SEE CHART FOR MAINTENANCE REQUIREMENTS



SOILS MAP

Bs   BROOKSTON SILTY CLAY LOAM

SOME OF THIS SOIL IS IN LARGE TRACTS WITHIN WHICH ARE IRREGULARLY SHAPED ISLAND LIKE AREAS OF LIGHTER COLORED SOILS, AND SOME OF IT IS IN DRAINAGE WAYS AND SMALL DEPRESSIONS SURROUNDED BY LIGHTER COLORED SOILS. THE CONTENT OF ORGANIC MATTER IS HIGH IN THIS SOIL. WETNESS IS THE MAIN LIMITATION THAT AFFECTS USE AND MANAGEMENT.

CrA   CROSBY SILT LOAM, 0 TO 3% SLOPES

THIS SOIL IS IN LARGE CONTINUOUS AREAS OR SMALL TO LARGE ISLAND LIKE AREAS THAT ARE INTERMINGLED WITH OR SURROUNDED BY POORLY DRAINED SOILS. THE AREAS ARE COMMONLY 10 TO 40 ACRES IN SIZE AND ARE IRREGULAR IN SHAPE. PERMEABILITY IS SLOW IN THIS SOIL. RUNOFF IS SLOW. WHERE SLOPES ARE OVER 2 PERCENT, EROSION IS A HAZARD. WETNESS IS THE MAIN LIMITATION IN USE AND MANAGEMENT.

MsC3 MIAMI CLAY LOAM, 6 TO 12 PERCENT SLOPES, SEVERELY ERODED

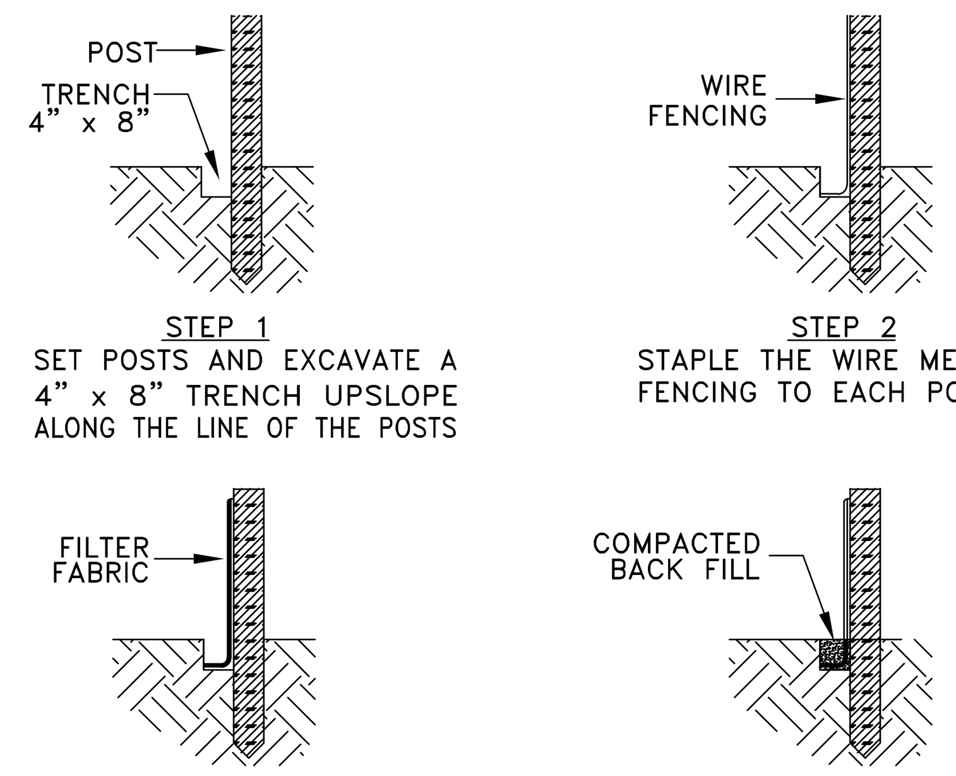
THIS SOIL IS IN AREAS BETWEEN SOILS OF THE UPLANDS AND SOILS AT LOWER ELEVATION OF THE BOTTOM LANDS. IT ALSO IS PARALLEL TO STEEPER SOILS THAT ARE ADJACENT TO SOILS OF THE BOTTOM LANDS AND IS ON SIDES OF NATURAL DRAINAGEWAYS.

	SOIL CONDITION Wet	Norm	Dry	Shade Tolerance	Close Mowing to 2–3 1/2inches	Tromping Tolerance	Fertility Needs	Winter Hardiness	Flooding Tolerance (days)	Mature Height (inches)	Emergence Time (days)	Salt Tolerance Gen.	Soil	Spray
Creeping Red Fescue Festuca rubra	2	1	2	1	1	1	Med.	1	20–25	12–18	7–21			S
Kentucky Bluegrass Poa pratinsis	2	1	2	1	1	1	Med.	1	25–35	12–18	10–20			MT
Tall Fescue Festuca L arundinacea	2	1	1	1	1	1	Low	1	24–35	24–36	5–14		T	
Perennial Ryegrass Lolium perenne	2	1	2	–	1	2	Med–High	2	15–20	12–18	5–10		MT	
Crownvetch Coronilla varia	–	1	1	2	–	–	Low	1	5–10	24	14–21	T		
Red Clover Trifolium pratense	–	1	–	2	–	–	Med.	1	7–10	18	5–10	S	S	

Ranking:
1 Good
2 Medium
– Not tolerant

Salt Tolerance (to both soil salts & spray):
T = Tolerance
MT = Medium Tolerance
S = Slight Tolerance

FIGURE 5–4



STEP 1
SET POSTS AND EXCAVATE A 4" x 8" TRENCH UPSLOPE ALONG THE LINE OF THE POSTS

STEP 2
STAPLE THE WIRE MESH FENCING TO EACH POST

STEP 3
ATTACH THE FILTER FABRIC TO THE WIRE FENCING AND EXTEND IT INTO THE TRENCH

STEP 4
BACK FILL THE TRENCH AND COMPACT THE EXCAVATED SOIL

NOTE:
1. WOOD OR STEEL SUPPORT POSTS DRIVEN 5 FT APART IF FENCE IS SUPPORTED BY WIRE; 7 FT APART IF EXTRA–STRENGTH FABRIC IS USED WITHOUT SUPPORT WIRE.
2. SUPPORT WIRE TO BE USED IF RECOMMENDED BY MANUFACTURER.

SILT FENCE INSTALLATION DETAIL
N.T.S.

Seedbed Preparation

Apply lime to raise the pH to the level needed for species being seeded. Apply 23 pounds of 12–12–12 analysis fertilizer (or equivalent) per 1000 sq. ft. (approximately 1000 pounds per acre) or fertilize according to test. Application of 150 lbs. of ammonium nitrate on areas low in organic matter and fertility will greatly enhance vegetative growth.

Work the fertilizer and lime into the soil to a depth of 2–3 inches with a harrow, disk or rake operated across the slope as much as possible.

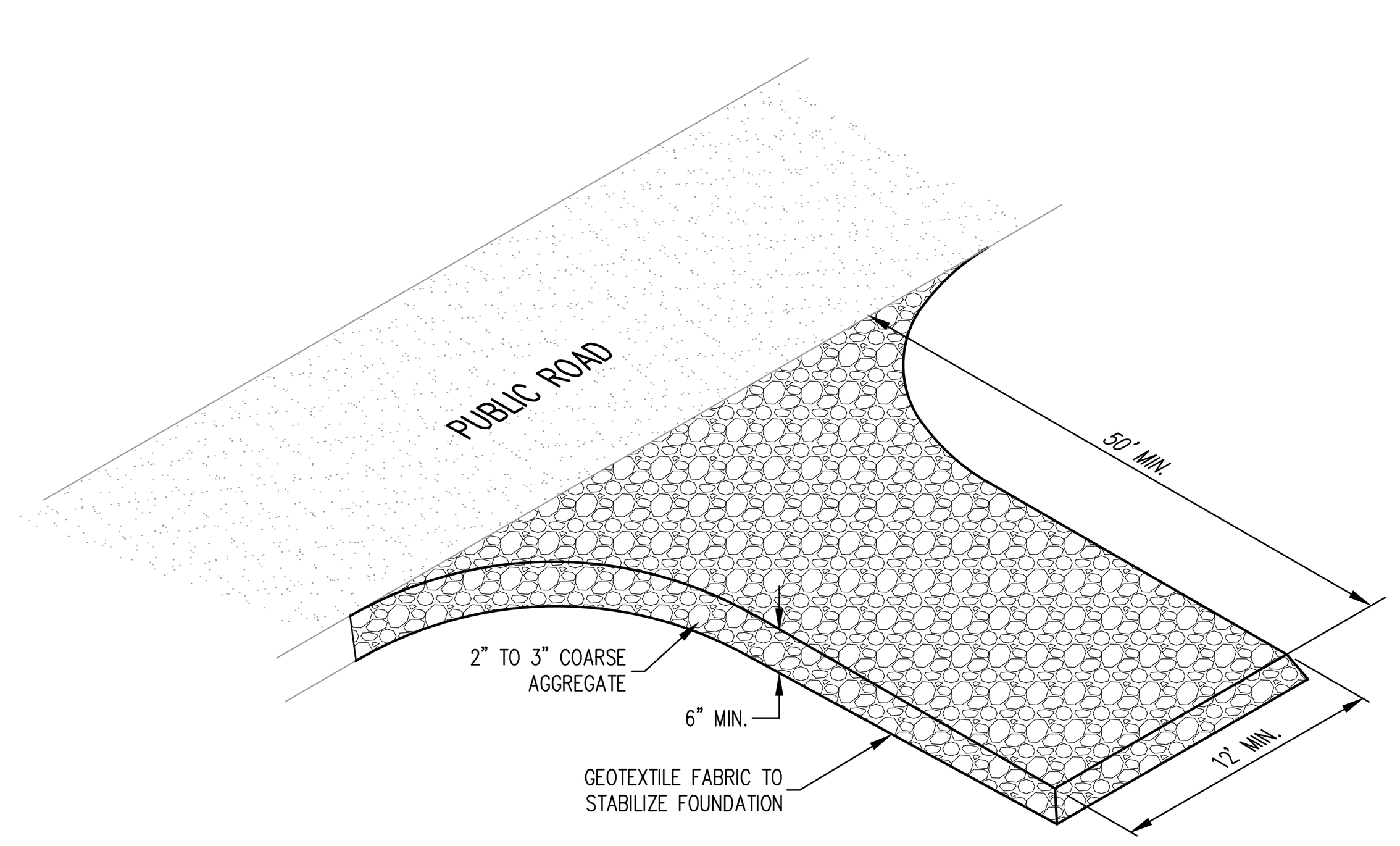
Seeding

Select a seed mixture based on projected use of the area (Figure 5–2), while considering best seeding dates. See Figure 5–3 this sheet. If tolerances are a problem, such as salt tolerance of seedings adjacent to streets and highways, see Figure 5–4 this sheet before final selection.

Figure 5–2: Permanent Seed Mixtures

Species	Seeding Rate lbs/acre	lbs/1000 sq. ft.	Suitable pH	Site Suitability* Droughty	well Drained	Wet
Level and Sloping, Open Areas						
1. Tall Fescue	35	.8	5.5–8.3	2	1	2
2. Tall Fescue Red Clover**	25 5	.6 .12	5.5–8.3		1	
3. Kentucky Bluegrass Creeping Red Fescue	15 15	.4 .4	5.5–7.5	2	1	
Steep Banks and Cuts						
4. Tall Fescue Kentucky Bluegrass	15 25	.4 .6	5.8–7.5	2	1	2
5. Tall Fescue Emerald Crownvetch**	35 10	.8 .25	5.5–8.3	2	1	
Lawns and High Maintenance Areas						
6. Kentucky Bluegrass Creeping Red Fescue	40 40	.9 .9	5.8–7.5	2	1	
7. Perennial Ryegrass (Turf Type)	170	4.0	5.0–7.5		1	
8. Tall Fescue	170	4.0	5.5–8.3	2	1	2

* 1 – Preferred 2 – Will Tolerate ** Inoculate with specific Inoculants.



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NTS

Temporary Seeding Dates

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wheat or Rye								▨	▨	▨		
Oats			▨	▨	▨							
Annual Ryegrass				▨	▨	▩	▩	▨				
Permanent Seeding Dates												
Non–Irrigated*			▨	▨	▨			▨	▨			
Irrigated			▨	▨	▨	▨	▨	▨	▨			
Dormant Seeding**	▨	▨										▨

▩ Irrigation needed during this period. To control erosion at times other than in the shaded areas, use mulch.

* Late summer seeding dates may be extended 5 days if mulch is applied.

** Increase seeding application by 50%.

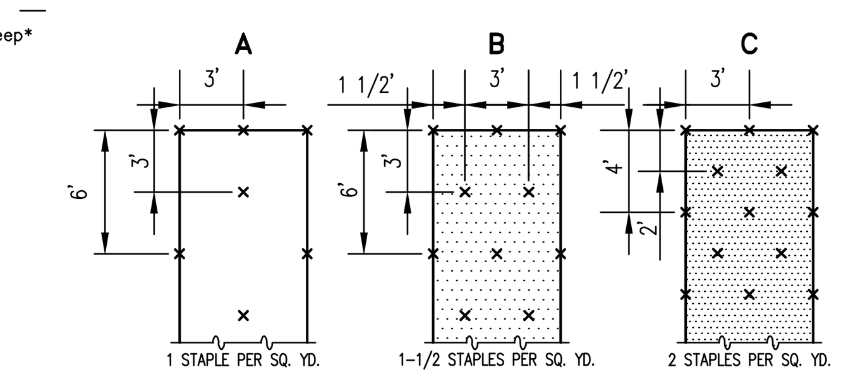
FIGURE 5–3

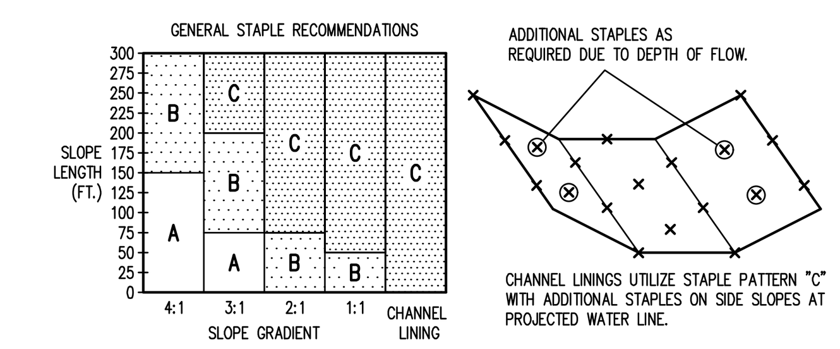
Temporary Seedings

Kind of Seed	1000 Sq. Ft.	Acre	Remarks
Wheat or Rye	3.5 lbs.	2 bu.	Cover seed 1" to 1 1/2" deep
Spring Oats	2.3 lbs.	3 bu.	Cover seed 1" deep
Annual Ryegrass	1 lb.	40 lbs.	Cover seed 1/4" deep*

* Not necessary where mulch is applied.

Indiana 811
Know what's below. Call before you dig.





STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL.

AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.

DANDY SACK SPECIFICATIONS

NOTE: THE DANDY SACK WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

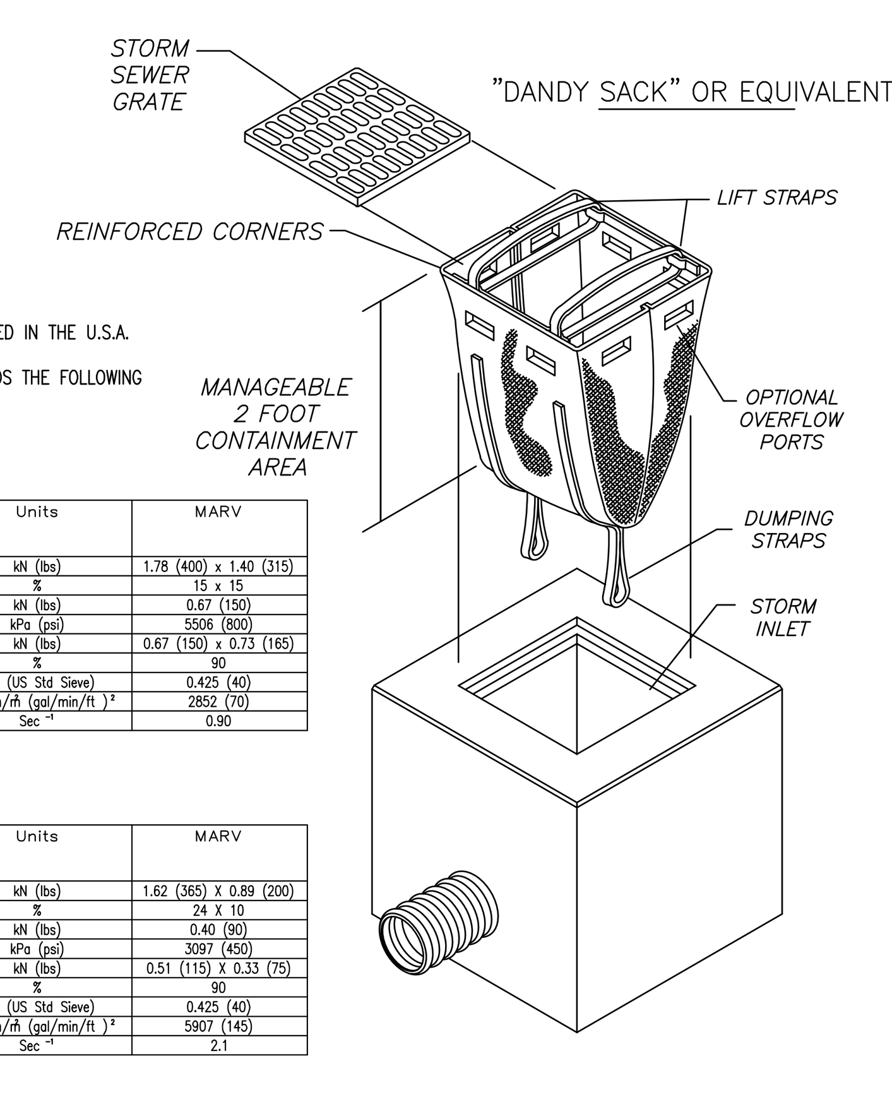
REGULAR FLOW DANDY SACK (BLACK)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	2852 (70)
Permittivity	ASTM D 4491	Sec⁻¹	0.90

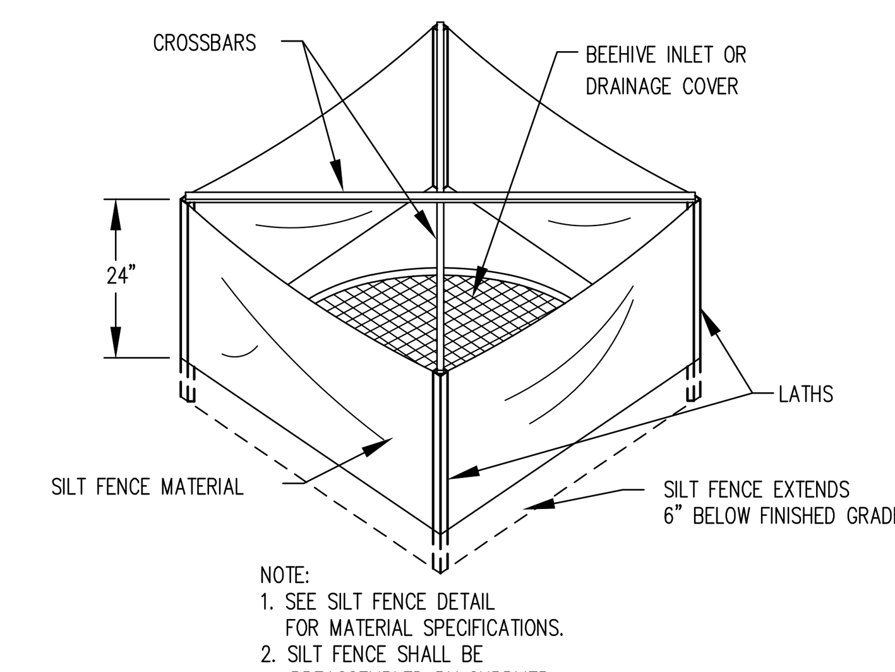
HI–FLOW DANDY SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	5907 (145)
Permittivity	ASTM D 4491	Sec⁻¹	2.1

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows

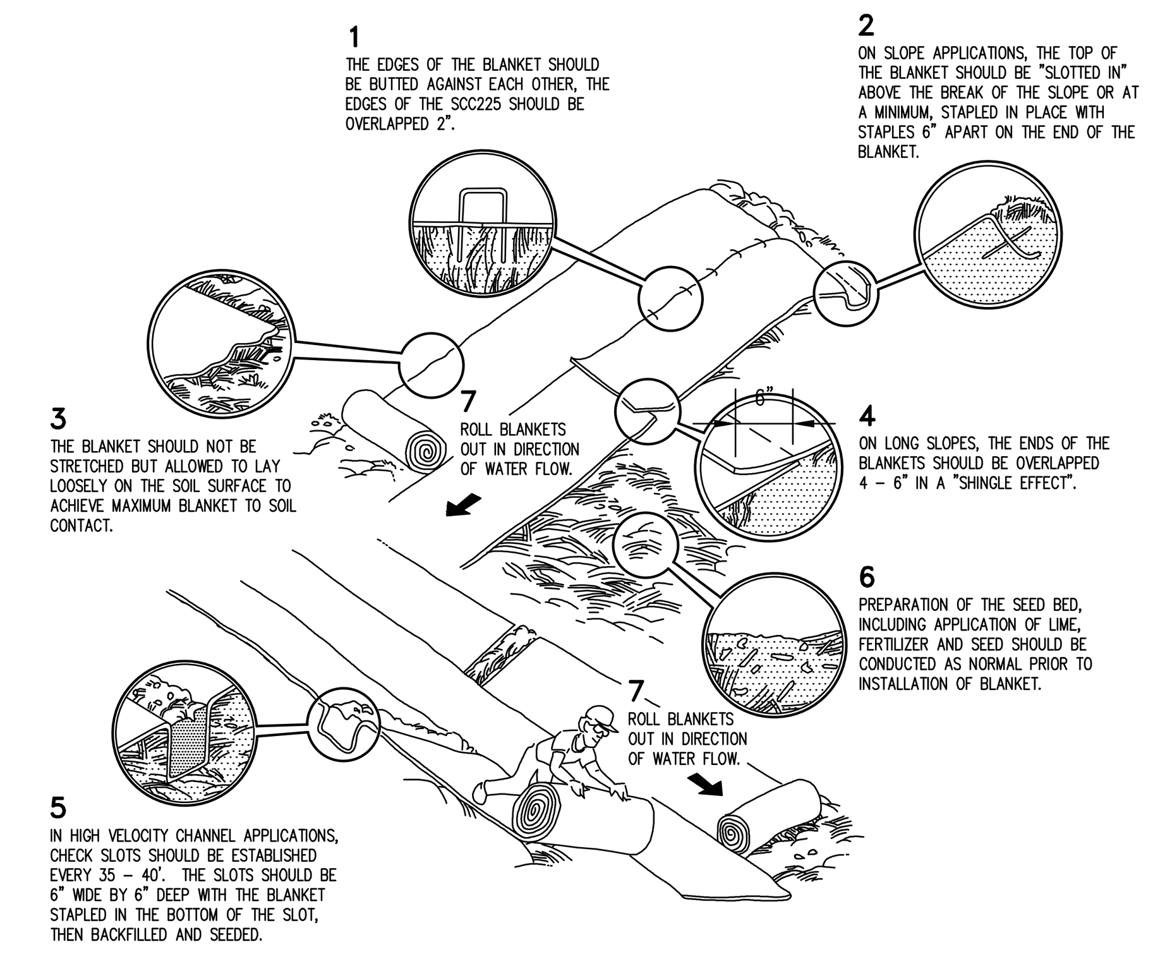


DROP INLET PROTECTION IN PAVEMENT (IP)
NTS

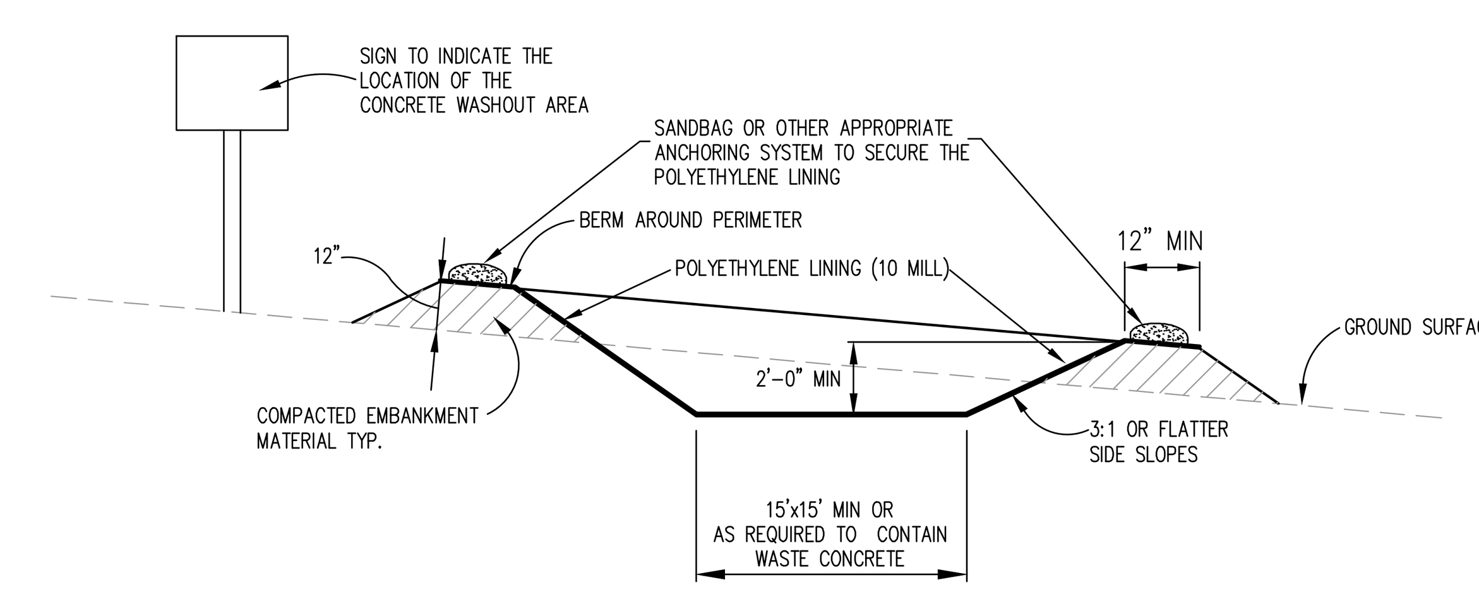


NOTE:
1. SEE SILT FENCE DETAIL FOR MATERIAL SPECIFICATIONS.
2. SILT FENCE SHALL BE PREASSEMBLED BY SUPPLIER.

INLET PROTECTION – SILT FENCE
NTS



EROSION BLANKET INSTALLATION
NTS



NOTES:
1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE AND LINED WITH POLYETHYLENE LINER.

2. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

3. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.

4. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.

5. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE INSPECTOR.

CONCRETE WASHOUT DETAIL
NTS

Innovative
ENGINEERING & CONSULTING
3961 Perry Boulevard
Ph. 317-769-2916
Whitestown, IN 46075
www.innovativeeci.com

REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
Erosion Control Details & Specifications

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE: 07/09/2020	DRAWN BY: ANR
ISSUED:	CHECKED BY:

JOB NUMBER: 19111

SHEET # C104

File Path\Name: J:\2019\19111 – CSU O–H Door\Dwgs\C104 swppp.dwg – Date: Jul 09,2020 – 3:31pm

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (Section A)

A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS
SEE EROSION CONTROL PLAN SHEETS C103

A2 11"X17" PLAT OF BUILDING LOT NUMBERS/BOUNDARIES AND ROADS
INCLUDED WITH SUBMITTAL

A3 NATURE AND PURPOSE OF PROJECT
EXPANSION OF EXISTING PARKING LOT FOR VEHICLES AND OUTDOOR STORAGE AS WELL AS THE INSTALLATION OF AN OVERHEAD DOOR AT THE REAR OF THE EXISTING BUILDING.

A4 PROJECT SITE VICINITY MAP
SEE PLAN SET TITLE PAGE, SHEET C100

A5 LEGAL DESCRIPTION OF PROJECT SITE
PROJECT LATITUDE: 39°42'19.98"N
PROJECT LONGITUDE: 86°22'11.85"W
LEGAL – SEE COVER SHEET FOR LEGAL DESCRIPTION

A6 LOTS AND PROPOSED SITE IMPROVEMENTS
DEVELOPMENT PLAN SHEETS C102

A7 HYDROLOGIC UNIT CODE (14 DIGIT)
05120201150060

A8 STATE OR FEDERAL WATER QUALITY PERMITS
N/A

A9 POINTS OF STORM WATER DISCHARGE FROM SITE
SITE WILL DISCHARGE INTO THE EXISTING STORM SYSTEM AT THE SE CORNER OF THE SITE. SEE SHEET C102

A10 ADJACENT WETLANDS, LAKES AND WATER COURSES
N/A

A11 RECEIVING WATERS
George Creek

A12 POTENTIAL DISCHARGES TO GROUND WATER
NONE

A13 FLOOD PLAINS, FLOOD WAY AND FLOOD WAY FRINGES
THE SITE IS LOCATED IN FLOOD AREA "X" PER COMMUNITY PANEL 18063C0278D EFFECTIVE 09/25/2009.

A14 PRE-CONSTRUCTION/POST-CONSTRUCTION PEAK DISCHARGE
10–YEAR, PRE–DEVELOPED PEAK DISCHARGE = 1.57 cfs, 10 YEAR POST–DEVELOPED PEAK DISCHARGE = 6.87 cfs,
100–YEAR POST–DEVELOPED PEAK DISCHARGE = 11.22 cfs

A15 ADJACENT LAND USE
NORTH – COMMERCIAL
SOUTH – COMMERCIAL
EAST – COMMERCIAL
WEST – RESIDENTIAL

A16 CONSTRUCTION LIMITS
SEE EROSION CONTROL PLAN SHEETS C103

A17 EXISTING VEGETATIVE COVER
THE SITE IS CURRENTLY A LAWN AREA.
SEE EROSION CONTROL PLAN SHEET C103

A18 SOILS MAP AND SOIL DESCRIPTIONS
SEE EROSION CONTROL DETAIL SHEET C104

A19 PROPOSED STORM WATER SYSTEMS
EXISTING – SEE UTILITY PLAN SHEETS C103

A20 OFF-SITE CONSTRUCTION ACTIVITIES
N/A

A21 PROPOSED SOIL STOCKPILES
SOILS TO BE STOCK PILED AS SHOWN ON THE EROSION CONTROL PLAN. SOIL MAY BE REMOVED FROM SITE AND TAKEN TO A PERMITTED SITE.

A22 SITE TOPOGRAPHY
SEE EROSION PLAN SHEETS C103

A23 FINAL SITE TOPOGRAPHY
SEE GRADING PLAN SHEETS C102

ASSESSMENT OF STORM WATER POLLUTION PREVENTION PLAN CONSTRUCTION COMPONENT (SECTION B)

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
THE MATERIALS AND SUBSTANCES LISTED BELOW ARE EXPECTED ON–SITE.

BIOLOGICAL SOLID WASTE
TRAP IN CONTAINERS, CLEANED REGULARLY, AND DISPOSED OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY. SCHEDULE WASTE COLLECTION MORE FREQUENTLY TO PREVENT CONTAINERS FROM OVERFILLING. UNTREATED, RAW SEWAGE OR SEPTAGE SHOULD NEVER BE DISCHARGED OR BURIED ONSITE.

ADHESIVES
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

AEROSOL SPRAY PRODUCTS
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

PAINTS, THINNERS AND SOLVENTS
ENSURE THAT CONTAINERS HAVE LIDS SO THAT THEY CAN BE COVERED BEFORE PERIODS OF RAIN, AND KEEP CONTAINERS IN DRY, COVERED AREA WHENEVER POSSIBLE.

BATTERIES
STORE ONSITE IN DRY COVERED AREA AND DISPOSE OF PER MANUFACTURER'S RECOMMENDATIONS IN CONJUNCTION WITH STATE, LOCAL AND FEDERAL REGULATIONS.

REGULATED PCB MATERIAL
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

MOTOR OIL
STORE PETROLEUM PRODUCTS FOR VEHICLES IN COVERED AREAS WITH LEAK–PROOF HEAVY DUTY PLASTIC LINER ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS. MOTOR OIL SHOULD BE CHANGED IN A DESIGNATED AREA WITH A METAL CATCH PAN OF 4'X4'X8" MINIMUM AND PROPERLY DISPOSED OF.

ANTIFREEZE
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

FUEL
STORE FUEL FOR VEHICLES IN COVERED AREAS WITH LEAK–PROOF HEAVY DUTY PLASTIC ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS.

BRAKE FLUIDS
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

HYDRAULIC
FLUIDS STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

RUBBLE-ASPHALT/CONCRETE
DISPOSE OF IN PROPER CONTAINERS AND RECYCLE PER LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.

LAND CLEARING DEBRIS
RECYCLE APPROPRIATELY IN APPROPRIATELY MARKED CONTAINERS AND SCHEDULE REGULAR PICKUP BEFORE OVERFILLING OCCURS.

EXPOSED AND STOCKPILED SOIL AND SEDIMENT
ALL EXPOSED OR STOCKPILED SOIL IS TO BE CONTAINED IN THE MANNER DESCRIBED ON THE EROSION CONTROL PLAN. ANY AREA PLANNED TO BE UNCHANGED FOR MORE THAN 15 DAYS IS TO BE TEMPORARY SEEDED AND MULCHED. ALL SEDIMENT COLLECTED IN EROSION COONTROL MEASURES IS TO BE PLACED IN STABLIZED AREA AND TREATED WITH THE APPROPRIATE SURFACE STABILIZATION MEASURE.

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (CONTINUED FROM PREVIOUS COLUMN)

WASTE
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL TRASH AND NON–RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD BE EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT THROW TRASH ON GROUND OR BURY MATERIALS ON SITE.

UNUSED BUILDING MATERIALS
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT BURY MATERIALS ON SITE.

CONCRETE (MASONRY) WASHOUT
CONCRETE WASHOUT AREAS SHOULD BERMED, SELF CONTAINED AREA APPROXIMATELY 10'X10'X3' IN A PLACE TO CONTAIN THE CONCRETE, BUT ALLOW THE WATER TO INFILTRATE THE GROUND. DRIED MATERIAL SHALL BE REMOVED AND DISPOSED OF PROPERLY. THE CONCRETE WASHOUT AREA SHALL BE PLACED AWAY FROM STORM WATER STRUCTURES AND WATER BODIES. SEE DETAIL.

FERTILIZERS/PESTICIDES/DETERGENTS
FERTILIZERS AND PESTICIDES WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TIME TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAG OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS. THE ORIGINAL LABEL AND SAFETY INFORMATION WILL BE RETAINED. STORAGE AREAS SHALL BE BERMED TO CONTAIN SPILL FROM RUNNING INTO GROUNDWATER OR STORM SYSTEM.

B2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION (SEE NOTED SEQUENCES ON EROSION CONTROL PLAN SHEET)

INITIAL SETUP
· NOTIFY SWCD AGENT, LOCAL JURISDICTION AND IDEM 48 HOURS IN ADVANCE OF BEGINNING WORK.

· POST A NOTICE OF THE PROJECT IN A PUBLICLY ACCESSIBLE LOCATION NEAR THE PROJECT FIELD OFFICE. THE NOTICE WILL INCLUDE A COPY OF THE COMPLETED NOI LETTER, THE NPDES PERMIT NUMBER, AND NAME, COMPANY NAME, AND TELEPHONE NUMBER OF PROJECT CONTACT PERSON.

· ALL EROSION CONTROL PRACTICES WILL BE INSTALLED UNDER THE GUIDANCE OF A PROFESSIONAL EXPERIENCED IN EROSION CONTROL. ALL OTHER NON–ENGINEERED EROSION CONTROL MEASURES INVOLVING VEGETATION WILL BE INSTALLED ACCORDING TO THE SPECIFICATIONS AND CRITERIA AS SET FORTH IN THIS EROSION CONTROL PLAN.

· EROSION CONTROL PRACTICES WILL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE PROJECT SITE AND MAINTAINED IN WORKING ORDER BY THE CONTRACTOR.

· FLAG OR DENOTE ALL CONSTRUCTION LIMITS.

· CALL FOR AN UNDERGROUND LOCATE TO VERIFY LOCATION OF EXISTING UTILITIES.

· RETAIN EXISTING VEGETATION WHEREVER POSSIBLE.

· IDENTIFY AND PROTECT ALL EXISTING VEGETATION DESIGNATED TO REMAIN.

· INSTALL EROSION CONTROL MEASURES AND SILT FENCE.

· INSTALL CONSTRUCTION ENTRANCE AND PROVIDE TEMPORARY SEEDING.

· INSTALL TEMPORARY SEEDING IN ALL PERMISSIBLE AREAS.

· INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF THE STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.

CONSTRUCTION
· BEGIN TOPSOIL REMOVAL.

· ALL STOCKPILED TOPSOIL TO BE SALVAGED SHALL BE PERIMETER PROTECTED. RUNOFF FROM STOCKPILES WILL BE FILTERED THROUGH SILT FENCES AND/OR STRAW BALES AND THE SEDIMENT BASIN. STOCKPILES SHALL NOT INTERFERE WITH NATURAL DRAINAGE. THE STOCKPILES SHALL BE REDISTRIBUTED OVER THE SITE AND FINAL GRADED IMMEDIATELY PRIOR TO SEEDING.

· INSTALL ADDITIONAL SILT FENCES OR OTHER SUCH MECHANISM AS REQUIRED.

· IMPLEMENT SELF–MONITORING PROGRAM.

· BEGIN SEEDING AND MULCHING PROGRAM (TEMPORARY SEED ALL DISTURBED AREAS).

·ROUGH GRADE SITE.

· INSTALL INLET PROTECTION.

· COMPLETE PARKING LOTS, ROADWAYS AND CURBS. NO LIME USED AS SOIL TREATMENT IS TO BE STORED ON SITE.

· FINAL GRADE AND LANDSCAPE.

· ALL AREAS WHICH CAN BE REGRADED TO A FINAL STATE SHALL BE REVEGETATED WITH AN APPROVED SEED MIXTURE AND FERTILIZED AT THE RATES INDICATED PER TOWN OF PLAINFIELD STANDARDS PAGE 19 OF 20.

· AFTER CONSTRUCTION AND FINAL GRADING, LANDSCAPE AND PERMANENTLY STABILIZE ALL DISTURBED SITES, INCLUDING BORROW AND DISPOSAL AREAS. ALSO REMOVE TEMPORARY RUNOFF CONTROL STRUCTURES AND ANY UNSTABLE SEDIMENT AROUND THEM, AND VEGETATE THOSE AREAS.

B3 STABLE CONSTRUCTION ENTRANCE LOCATION AND SPECIFICATION
CONSTRUCTION DRIVE TO BE CONSTRUCTED PER TOWN OF PLAINFIELD STANDARDS.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS
SILT FENCE; SEE EROSION CONTROL PLAN SHEET C103 FOR LOCATIONS; SEE PLAINFIELD TOWN STANDARDS FOR INSTALLATION DETAILS.

B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS
EROSION CONTROL BLANKETS; SEE TOWN OF PLAINFIELD STANDARD DETAILS.

B6 INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS
BASKET CURB INLET PROTECTION SEE SHEET C103 FOR LOCATIONS, SEE TOWN OF PLAINFIELD STANDARD DETAILS.

B7 RUNOFF CONTROL MEASURES
THE PROPOSED POND AND ROCK CHECK DAMS WILL BE USED TO CONTROL RUNOFF. SEE THE GRADING PLAN FOR POND INFORMATION; SEE TOWN OF PLAINFIELD STANDARD DETAILS.

B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS
EXISTING – RIP RAP STONE END SECTION TREATMENT SEE EROSION CONTROL DETAILS. AND TOWN OF PLAINFIELD STANDARD DETAILS.

B9 GRADE STABILIZATION STRUCTURES
N/A

B10 CONSTRUCTION DETAILS FOR STORM WATER MEASURES
THE STORM WATER RUNOFF WILL BE TREATED FOR WATER QUALITY WITH A DYNAMIC SEPARATOR, PERMANENT SEEDING, MULCHING, THE USE OF EROSION CONTROL BLANKETS AND STORM SEWER INLET BASKETS. SEE THE EROSION CONTROL SHEETS FOR LOCATIONS. SEE SHEETS C112–C113 FOR DETAILS AND SPECIFICATIONS. SEE PLAINFIELD STANDARD DETAIL FOR ADDITIONAL INFORMATION.

B11 TEMPORARY SURFACE STABILIZATION METHODS
- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON–SITE INSPECTION.
- SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
- WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
- SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
- SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ONSITE.

B11 TEMPORARY SURFACE STABILIZATION METHODS (CONTINUED)

SCHEDULE OF EARTHWORK ACTIVITIES:

A) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 15 DAYS OR AS DIRECTED BY THE ENGINEER.

B) TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIME OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.

TEMPORARY SEEDING SHALL UTILIZE SEED SPECIES, APPLICATION RATES, AND DATES SET FORTH IN TOWN OF PLAINFIELD STANDARDS PAGE 19 OF 20.

B12 PERMANENT SURFACE STABILIZATION METHODS
- AT THE PROPER TIME, WITH APPROVAL FROM THE OWNER, AND ONLY AFTER NOTIFYING THE SWCD AGENT, THE CONTRACTOR SHALL DISMANTLE THE REMAINING EROSION CONTROL ELEMENTS ONLY AS REQUIRED TO FINISH ALL GRADING. CONTRACTOR SHALL NOTIFY THE SWCD IN ADVANCE AND ARRANGE FOR THE LANDSCAPING CONTRACTOR TO FOLLOW UP IMMEDIATELY WITH REVEGETATION OF THE REMAINING AREAS.
- CONTRACTOR SHALL REMOVE ANY UNSUITABLE MATERIAL FROM THE SITE LEFT FROM THE EROSION CONTROL MEASURES.

ANY BARE DISTURBED AREAS WILL BE GRADED, SEEDED AND MULCHED OR OTHERWISE REVEGETATED OR STABILIZED, AS PER THE EROSION CONTROL PLAN. PERMANENT SEEDING WILL BE ACCORDING TO THE SEED SPECIES, RATES AND DATES IN TOWN OF PLAINFIELD STANDARDS PAGE 19 OF 20.

- FINAL STABILIZATION WILL BE CONSIDERED ACHIEVED WHEN PERENNIAL VEGETATIVE COVER HAS A DENSITY OF SEVENTY PERCENT (70%) ON ALL UNPAVED AREAS OR AN EQUIVALENT PERMANENT STABILIZATION MEASURE HAS BEEN UTILIZED. IMPLEMENTATION AND MAINTENANCE WILL BE ACCORDING TO SECTIONS C2 AND C5 BELOW.
- PERMANENT SEEDING SHALL UTILIZE SEED SPECIES, APPLICATION RATES, AND DATES SET FORTH IN TOWN OF PLAINFIELD STANDARDS PAGE 19 OF 20.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN
THE PROPER MANAGEMENT AND DISPOSAL OF WASTES SHOULD BE PRACTICED ON SITE AT ALL TIMES TO REDUCE POLLUTION STORM WATER RUNOFF. HAZARDOUS WASTE SHOULD ALWAYS BE DISPOSED OF THROUGH A DESIGNATED HAZARDOUS WASTE MANAGEMENT OR RECYCLING FACILITY. HAZARDOUS WASTE SHOULD NOT BE DISPOSED OF WITH ORDINARY GARBAGE, OR POURED INTO THE SANITARY SEWER SYSTEM OR ONTO THE GROUND.

DESIGNATE A WASTE COLLECTION AREA ON–SITE THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY INTO A WATER BODY.

KEEP PRODUCTS IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE–SEALABLE, THEN ORIGINAL LABEL AND MATERIAL SAFETY DATA WILL BE RETAINED. IF A PRODUCT DOES NOT HAVE ITS ORIGINAL LABEL, LABEL IT YOURSELF IF YOU ARE SURE OF CONTENTS. MAKE SURE PRODUCTS ARE PROPERLY SEALED TO PREVENT LEAKS AND SPILLS AND STORED IN A WEATHER PROOF SELF CONTAINED AREA AWAY FROM HEAT, SPARKS AND FLAMES.

A PROGRAM FOR RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE SHALL BE ESTABLISHED. ALL RECYCLING CONTAINERS WILL BE CLEARLY LABELED.

ALL CONSTRUCTION ACTIVITIES TO BE MONITORED AND MAINTAINED BY THE CONTRACTOR. AS EACH NEW SUBCONTRACTOR COMES ON–SITE, THE CONTRACTOR WILL CONDUCT AND DOCUMENT A MEETING TO ENSURE AWARENESS OF THE POLLUTANT PREVENTION PROGRAM. GUIDELINES FOR PROPER HANDLING, STORAGE AND DISPOSAL OF CONSTRUCTION SITE WASTES SHOULD BE POSTED IN STORAGE AND USE AREAS AND WORKERS SHOULD BE TRAINED IN THESE PRACTICES TO ENSURE EVERYONE IS KNOWLEDGEABLE ENOUGH TO PARTICIPATE.

IN AN EMERGENCY, THE CONTRACTOR WILL CALL 911. IN THE EVENT OF A SPILL THAT POSES NO IMMEDIATE THREAT, THE CONTRACTOR WILL CONTACT THE LOCAL FIRE DEPARTMENT AND IDEM EMERGENCY RESPONSE AT (888) 233–7745 WITHIN 24 HOURS OF THE SPILL. EMERGENCY PHONE NUMBERS AND PROCEDURES SHALL BE PROMINENTLY DISPLAYED AT THE WORK SITE WHERE SPILLS MAY OCCUR, SUCH AS STAGING/REFUELING AREAS.

LOCAL FIRE DEPARTMENT	EMERGENCY	NON EMERGENCY
PLAINFIELD FIRE DEPARTMENT	911	317.839.2566

CLEAN UP SPILLS IMMEDIATELY. FOR HAZARDOUS MATERIALS FOLLOW CLEANUP INSTRUCTIONS ON THE PACKAGE. USE ABSORBENT MATERIAL SUCH AS SAWDUST OR KITTY LITTER TO CONTAIN THE SPILL. PROPER SAFETY MATERIALS SHOULD BE STORED ON SITE IN CASE OF ACCIDENT OR SPILL WHICH SHOULD INCLUDE BUT NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THAT PURPOSE. SPILL AREAS SHOULD BE WELL VENTILATED.

DURING THE DEMOLITION PHASE OF CONSTRUCTION, PROVIDE EXTRA CONTAINERS AND SCHEDULE MORE FREQUENT PICKUPS FOR RECYCLABLES AND GARBAGE. COLLECT, REMOVE, AND DISPOSE OR ALL CONSTRUCTION SITE WASTES AT AUTHORIZED DISPOSAL AREAS. CONTACT LOCAL ENVIRONMENTAL AGENCY TO IDENTIFY DISPOSAL SITES OR AUTHORIZED CONTRACTORS.

CONSTRUCTION VEHICLES SHOULD BE INSPECTED FOR LEAKS DAILY AND REPAIRED IMMEDIATELY IN A SELF CONTAINED AREA DESIGNATED FOR VEHICLE MAINTENANCE AND REPAIR. THE VEHICLE MAINTENANCE AREA SHOULD BE CONDUCTED ON AN AREA THAT IS TO BECOME FUTURE PAVEMENT. THIS AREA WILL BE DESIGNED TO MINIMIZE CONTACT BETWEEN EQUIPMENT ACTIVITIES AND RAINFALL OR RUNOFF. SPILLS MUST BE CLEANED UP AND MATERIALS DISPOSED OF IMMEDIATELY.

CONTAINERS OR EQUIPMENT THAT MAY MALFUNCTION AND CAUSE LEAKS OR SPILLS SHOULD BE IDENTIFIED THROUGH REGULAR INSPECTION AND STORAGE OF USE AREAS. EQUIPMENT AND CONTAINERS SHOULD BE INSPECTED REGULARLY FOR LEAKS, CORROSION, SUPPORT OR FOUNDATION FAILURE, OR ANY OTHER SIGNS OF DETERIORATION AND SHOULD BE TESTED FOR SOUNDNESS. ANY FOUND TO BE DEFECTIVE SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.

B14 MONITORING AND MAINTENANCE GUIDELINES
A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE:
BY THE END OF THE NEXT DAY FOLLOWING EACH 1/2 INCH STORM EVENT;
A MINIMUM OF ONE (1) TIME PER WEEK.

THE EVALUATION WILL: ADDRESS THE MAINTENANCE OF EXISTING EROSION CONTROL MEASURES TO ENSURE PROPER FUNCTIONING; AND IDENTIFY ANY ADDITIONAL MEASURES NECESSARY TO MEET THE REQUIREMENTS OF THE EROSION CONTROL PLAN.

WRITTEN EVALUATION REPORTS INCLUDE:
THE NAME OF THE INDIVIDUAL PERFORMING THE EVALUATION; THE DATE OF THE EVALUATION; PROBLEMS IDENTIFIED AT THE PROJECT SITE; AND DETAILS OR CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.

ALL WRITTEN EVALUATION REPORTS FOR THE PROJECT SITE WILL BE MAINTAINED BY THE CONSTRUCTION SUPERINTENDENT THROUGHOUT THE TERM OF THE PROJECT CONSTRUCTION AND MADE AVAILABLE TO THE SWCD OR OTHER INSPECTING AUTHORITY WITHIN 48 HOURS OF A REQUEST.

MAINTENANCE OF SPECIFIC EROSION CONTROL MEASURES SHALL BE ACCORDING TO THE LOCAL JURISDICTIONAL AGENCY.

CONCRETE WASHOUT BASIN MAINTENANCE
1. INSPECT DAILY AND AFTER EACH STORM EVENT.
2. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
3. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
4. INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
5. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
6. EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. PREFABRICATED SYSTEMS SHOULD ALSO UTILIZE THIS CRITERION, UNLESS THE MANUFACTURER HAS ALTERNATE SPECIFICATIONS.
7. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
8. DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE, OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY.
9. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
10. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
11. CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NOT EVAPORATE AND THE SYSTEM IS NEAR CAPACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY CONTAINMENT SYSTEM OR BASIN FOR FURTHER DEWATERING.
12. PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE.
13. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION.
14. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.
15. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

GRASS–LINED CHANNELS MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK CHANNEL OUTLET AND ROAD CROSSINGS FOR BLOCKAGE, SEDIMENT, BANK INSTABILITY, AND PIPING OR SCOUR HOLES; REMOVE ANY BLOCKAGE, AND MAKE REPAIRS IMMEDIATELY.
3. REMOVE SIGNIFICANT SEDIMENT AND DEBRIS FROM CHANNEL TO MAINTAIN DESIGN CROSS SECTION AND CHANNEL GRADE AND TO PREVENT SPOT EROSION.

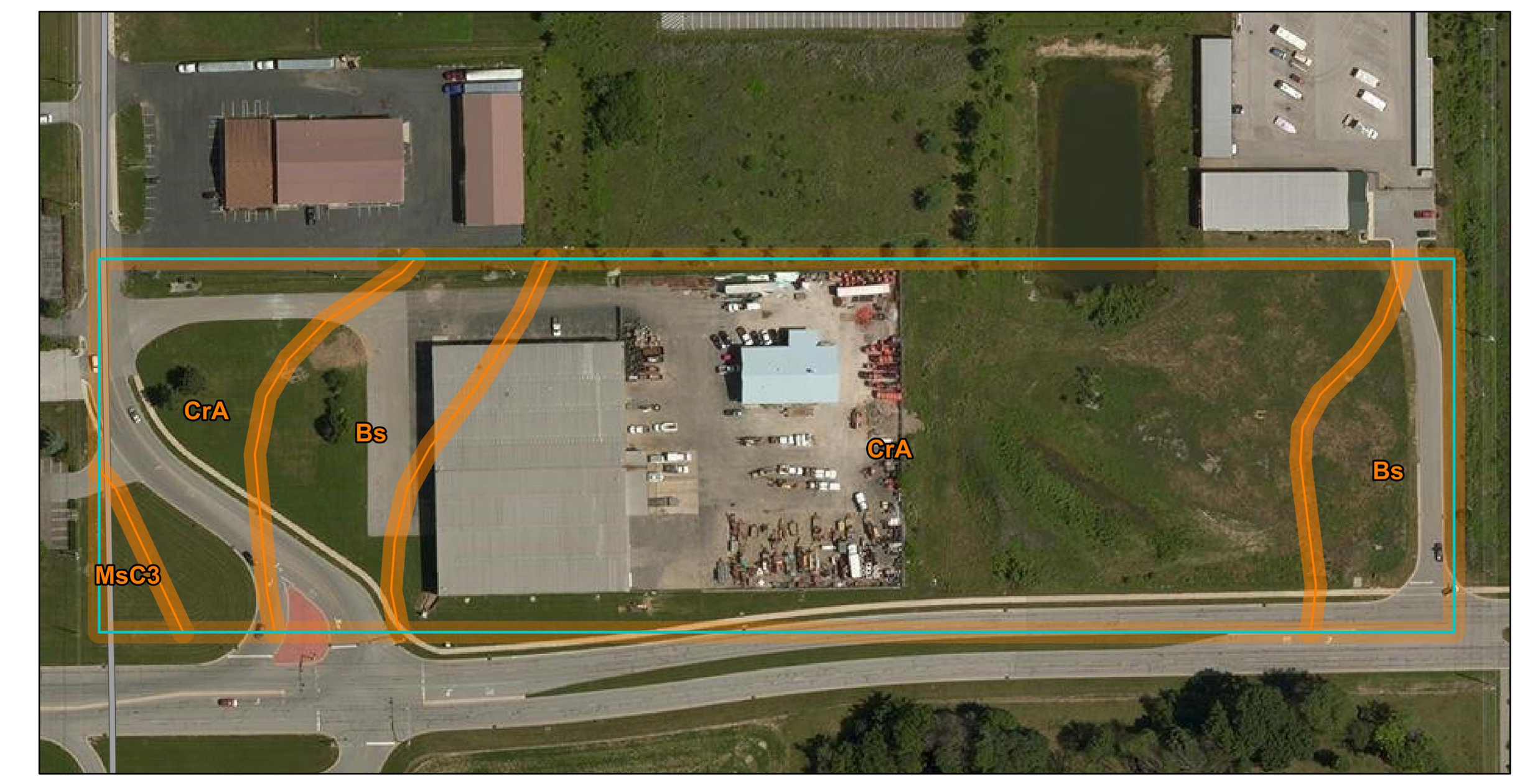
MULCHING MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
3. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
4. IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

TEMPORARY SEEDING MAINTENANCE
1. SEEDED AREAS WILL BE INSPECTED WITHIN 24 HOURS OF EACH RAINFALL EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
2. CHECK FOR EROSION OR MOVEMENT OF MUCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80% DENSITY): RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
4. IF NITROGEN DEFICIENCY IS APPARENT, TOP–DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

PERMANENT SEEDING MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL THE VEGETATION IS SUCCESSFULLY ESTABLISHED.
2. CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE VIGOROUS DARK GREEN OR BLUISHGREEN SEEDLINGS WITH A UNIFORM VEGETATIVE COVER DENSITY OF 90 PERCENT OR MORE.
3. CHECK FOR EROSION OR MOVEMENT OF MULCH.
4. REPAIR DAMAGED, BARE, GULLIED, OR SPARSELY VEGETATED AREAS AND THEN FERTILIZE, RESEED, AND APPLY AND ANCHOR MULCH.
5. IF PLANT COVER IS SPARSE OR PATCHY, EVALUATE THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCH APPLICATION; REPAIR AFFECTED AREAS EITHER BY OVERSEEDING OR PREPARING A NEW SEEDBED AND RESEEDING. APPLY AND ANCHOR MULCH ON THE NEWLY SEEDED AREAS.
6. IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE SOIL PH OR NUTRIENT DEFICIENCY PROBLEMS. (CONTACT YOUR SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE.)
7. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.
8. ADD FERTILIZER THE FOLLOWING GROWING SEASON. FERTILIZE ACCORDING TO SOIL TEST RECOMMENDATIONS.
9. FERTILIZE TURF AREAS ANNUALLY. APPLY FERTILIZER IN A SPLIT APPLICATION. FOR COOL–SEASON GRASSES, APPLY ONE–HALF OF THE FERTILIZER IN LATE SPRING AND ONEHALF IN EARLY FALL. FOR WARM–SEASON GRASSES, APPLY ONE–THIRD IN EARLY SPRING, ONE–THIRD IN LATE SPRING, AND THE REMAINING ONE–THIRD IN MIDDLE SUMMER.

B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS

N/A



SOILS MAP

Bs BROOKSTON SILTY CLAY LOAM

SOME OF THIS SOIL IS IN LARGE TRACTS WITHIN WHICH ARE IRREGULARLY SHAPED ISLAND LIKE AREAS OF LIGHTER COLORED SOILS, AND SOME OF IT IS IN DRAINAGE WAYS AND SMALL DEPRESSIONS SURROUNDED BY LIGHTER COLORED SOILS. THE CONTENT OF ORGANIC MATTER IS HIGH IN THIS SOIL. WETNESS IS THE MAIN LIMITATION THAT AFFECTS USE AND MANAGEMENT.

CrA CROSBY SILT LOAM, 0 TO 3% SLOPES

THIS SOIL IS IN LARGE CONTINUOUS AREAS OR SMALL TO LARGE ISLAND LIKE AREAS THAT ARE INTERMINGLED WITH OR SURROUNDED BY POORLY DRAINED SOILS. THE AREAS ARE COMMONLY 10 TO 40 ACRES IN SIZE AND ARE IRREGULAR IN SHAPE. PERMEABILITY IS SLOW IN THIS SOIL. RUNOFF IS SLOW. WHERE SLOPES ARE OVER 2 PERCENT, EROSION IS A HAZARD. WETNESS IS THE MAIN LIMITATION IN USE AND MANAGEMENT.

MsC3 MIAMI CLAY LOAM, 6 TO 12 PERCENT SLOPES, SEVERELY ERODED

THIS SOIL IS IN AREAS BETWEEN SOILS OF THE UPLANDS AND SOILS AT LOWER ELEVATION OF THE BOTTOM LANDS. IT ALSO IS PARALLEL TO STEEPER SOILS THAT ARE ADJACENT TO SOILS OF THE BOTTOM LANDS AND IS ON SIDES OF NATURAL DRAINAGEWAYS.

STORM WATER POLLUTION PREVENTION PLAN POST CONSTRUCTION COMPONENT (SECTION C)

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE.
POLLUTANTS THAT WILL BE EXPECTED TO MAKE THEIR WAY INTO THE STORM WATER COLLECTION SYSTEM IN A SIGNIFICANT AMOUNT INCLUDE GRIT FROM THE ROAD SURFACE WEARING, YARD WASTE, PAVEMENT RUN–OFF FROM STORAGE AREA AND DRIVES, AND PAVEMENT TREATMENTS DURING COLD WEATHER. THE WEARING OF ROADWAY SURFACES WILL RESULT IN SMALL PARTICLES OF PORTLAND CEMENT CONCRETE AND BITUMINOUS CEMENT CONCRETE. ROADWAY TREATMENTS WILL INCLUDE THE USE OF SALT COMPOUNDS AND SAND AS A MEANS OF LIMITING ICE BUILDUP ON PUBLIC ROADS, AS WELL AS PARKING AREAS AND WALKS. EACH WILL NOT ONLY CAUSE POLLUTION IN THE FORM OF SMALL PARTICULATE MATTER BUT EACH WILL ALSO RELEASE SOME CHEMICAL COMPOUNDS INTO THE STORM WATER SYSTEM. GRANULAR SEDIMENTS WILL ALSO BE RELEASED FROM AREAS THAT ARE INTENDED TO BE TURF, BUT DUE TO WEARING THE VEGETATIVE COVER HAS BEEN DAMAGED OR DESTROYED.

C2 SEQUENCE DESCRIBING STORM WATER QUALITY MEASURE IMPLEMENTATION
SEDIMENT COLLECTION (DANDY SACKS) WILL BE PLACED IN EXISTING CATCH BASINS AT THE BEGINNING OF CONSTRUCTION. STORMWATER TREATMENT WILL BE PERFORMED BY THE EXISTING REGIONAL POND AND HYDRODYNAMIC SEPARATOR. TEMPORARY SEEDING WILL BE USED DURING CONSTRUCTION TO STABILIZE AREAS TO BE UNCHANGED FOR EXTENDED PERIODS OF TIME. EROSION CONTROL BLANKETS AND PERMANENT SEEDING WILL BE INSTALLED AS SITE GRADING IS COMPLETE. THE EROSION CONTROL PLAN HAS BEEN ESTABLISHED, SEE SHEET C104 FOR DETAILS.

C3 DESCRIPTION OF PROPOSED POST CONSTRUCTION STORM WATER QUALITY MEASURE
STORMWATER TREATMENT WILL BE PERFORMED BY THE EXISTING REGIONAL POND AND HYDRODYNAMIC SEPARATOR.

C4 CONSTRUCTION DETAILS AND SPECIFICATIONS
STORMWATER TREATMENT WILL BE PERFORMED BY THE EXISTING REGIONAL POND AND HYDRODYNAMIC SEPARATOR AND TEMPORARY BMP'S DURING CONSTRUCTION. SEE THE DEVELOPMENT PLAN AND EROSION CONTROL PLAN FOR SEEDING/SOD LOCATIONS. SEE THE TOWN OF PLAINFIELD DETAILS FOR SEEDING/SOD SPECIFICATION.

ESTIMATED START:
ESTIMATED COMPLETION OF SITE DEVELOPMENT:

CONTACT PERSON:
BRYAN PAUL
C.S.U. INC.
3919 CLARKS CREEK RD.
PLAINFIELD, IN 46168
314–972–0802

Innovative
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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
Stormwater Pollution Prevention Plan

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY:
07/09/2020	ANR
ISSUED:	CHECKED BY:

JOB NUMBER: 19111

SHEET # C105

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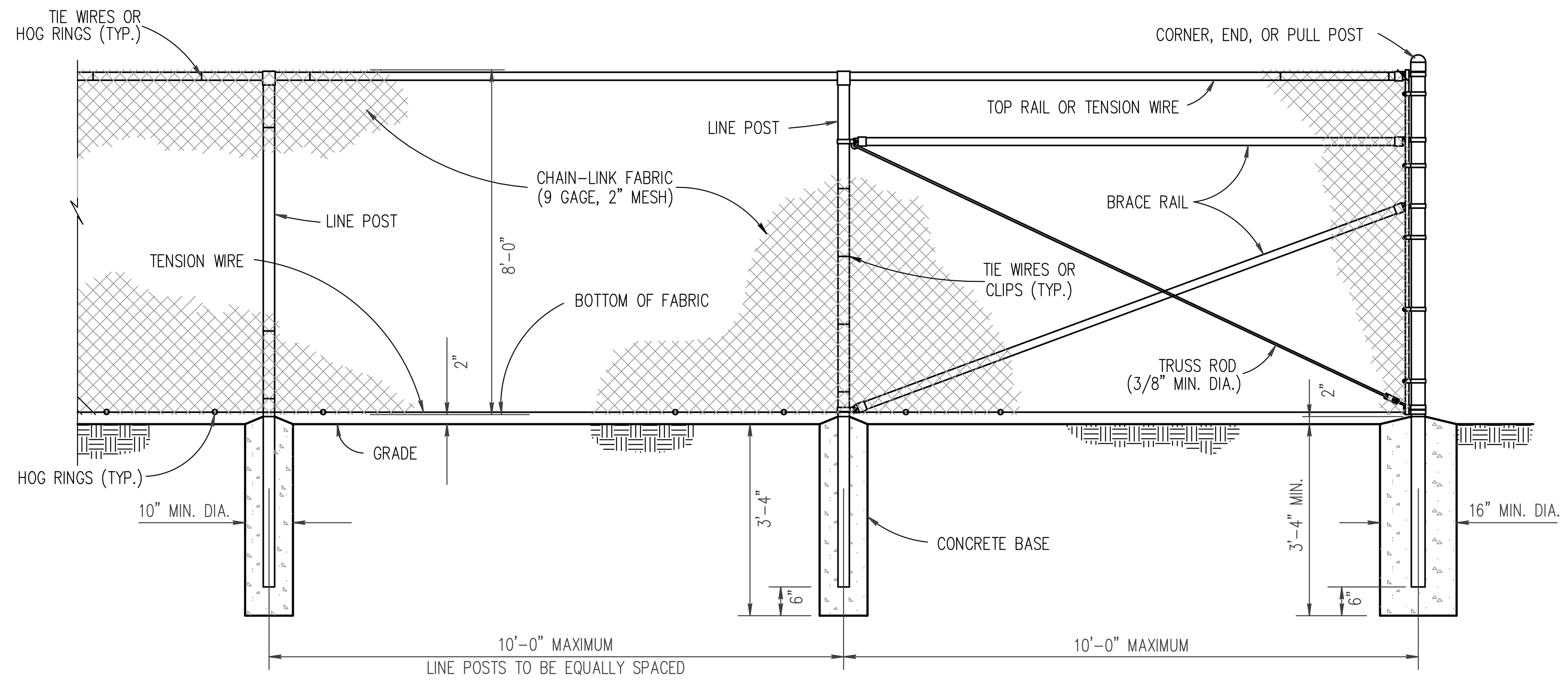
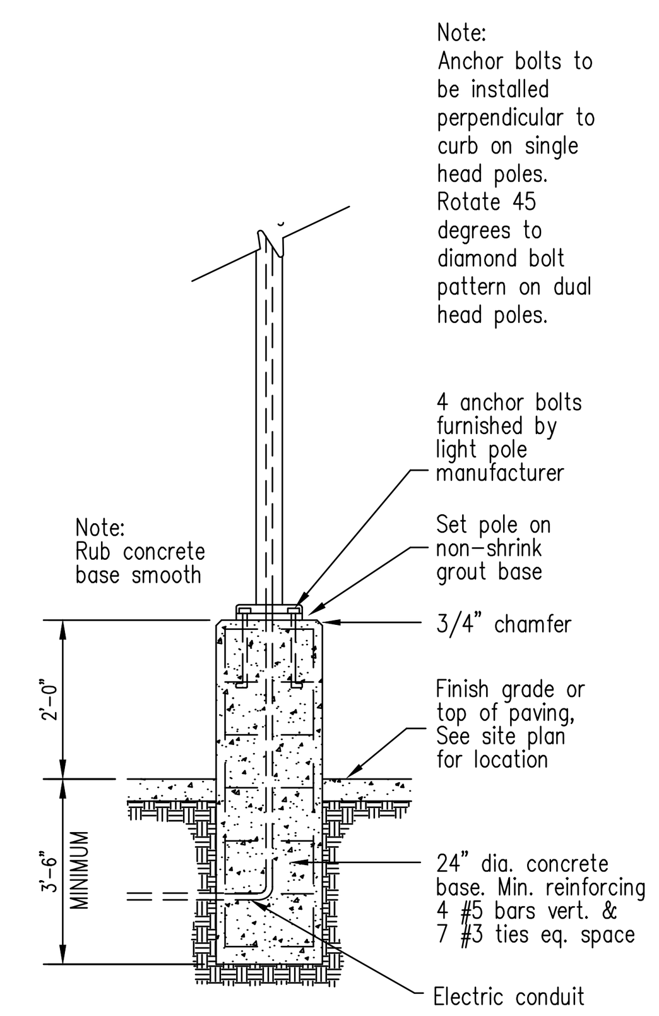
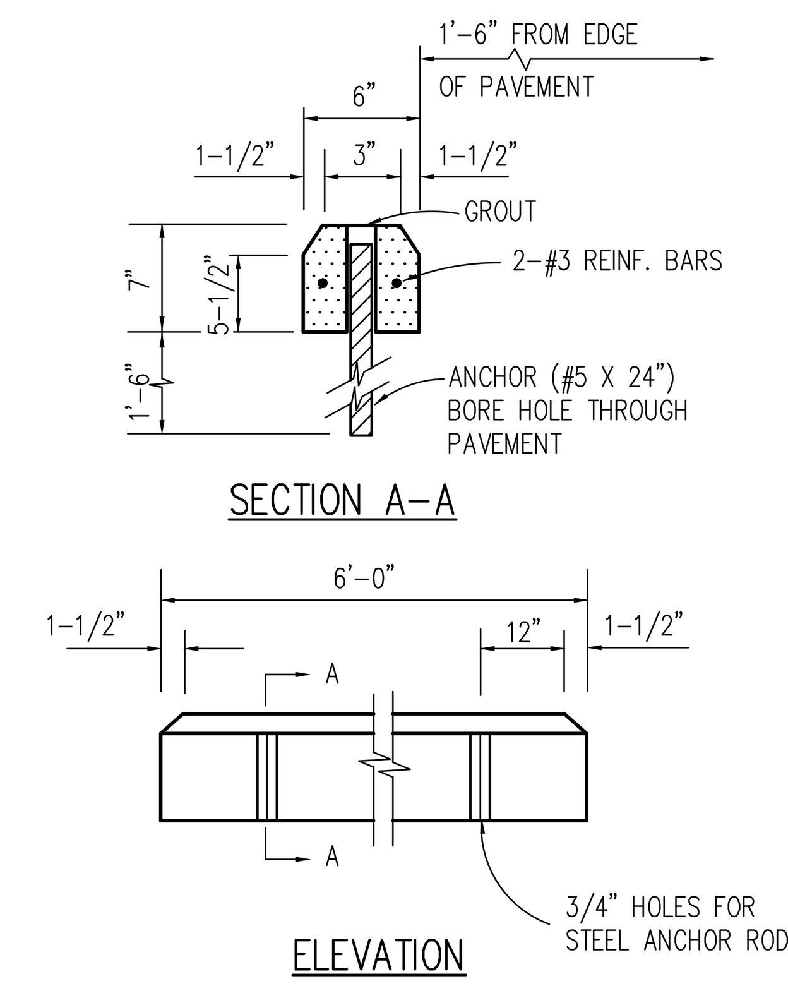


CHAIN-LINK SECURITY FENCE DETAIL (7/C801)
NTS



TYPICAL LIGHT POLE & BASE (6/C801)
NTS
See Electrical Plan for Final Design



PRECAST CONCRETE WHEEL STOP (5/C801)
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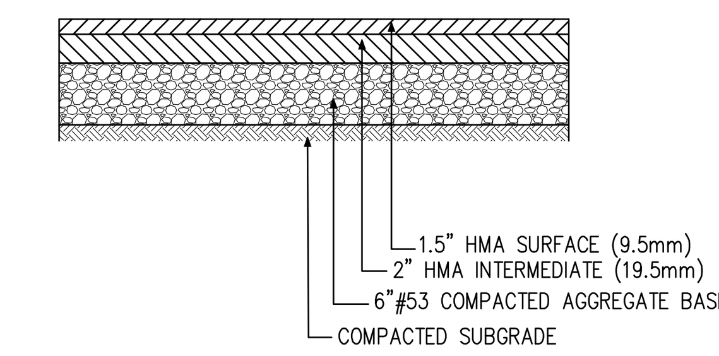

TYPICAL PAVEMENT SECTION (1/C801)
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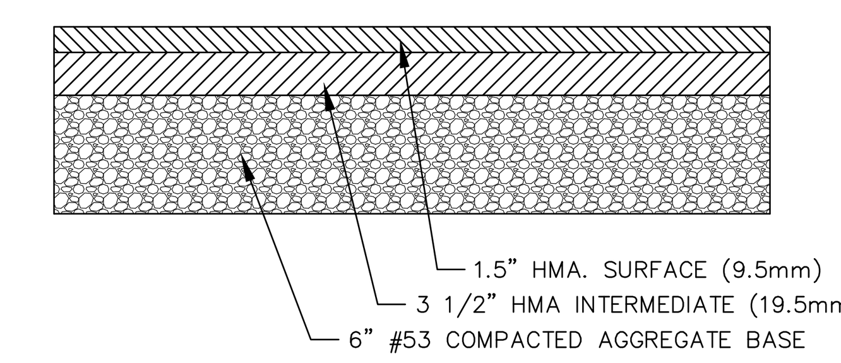

● PREPARED SUBGRADE PER INDOT No. 201

TYPICAL HEAVY DUTY PAVEMENT SECTION (2/C801)
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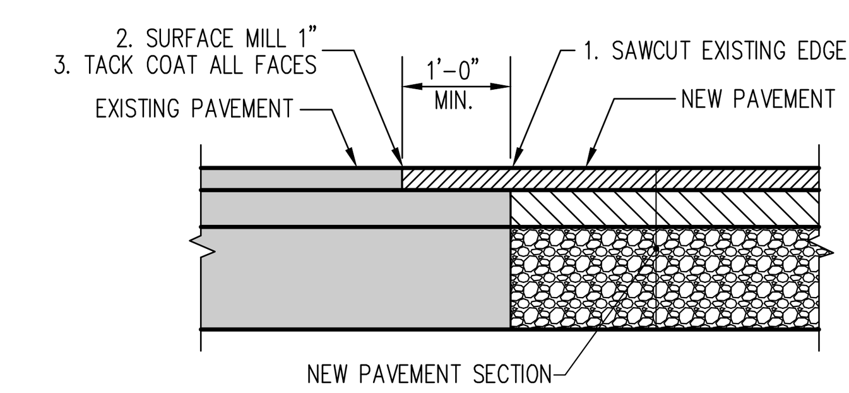

TYPICAL PAVEMENT TIE-IN DETAIL (3/C801)
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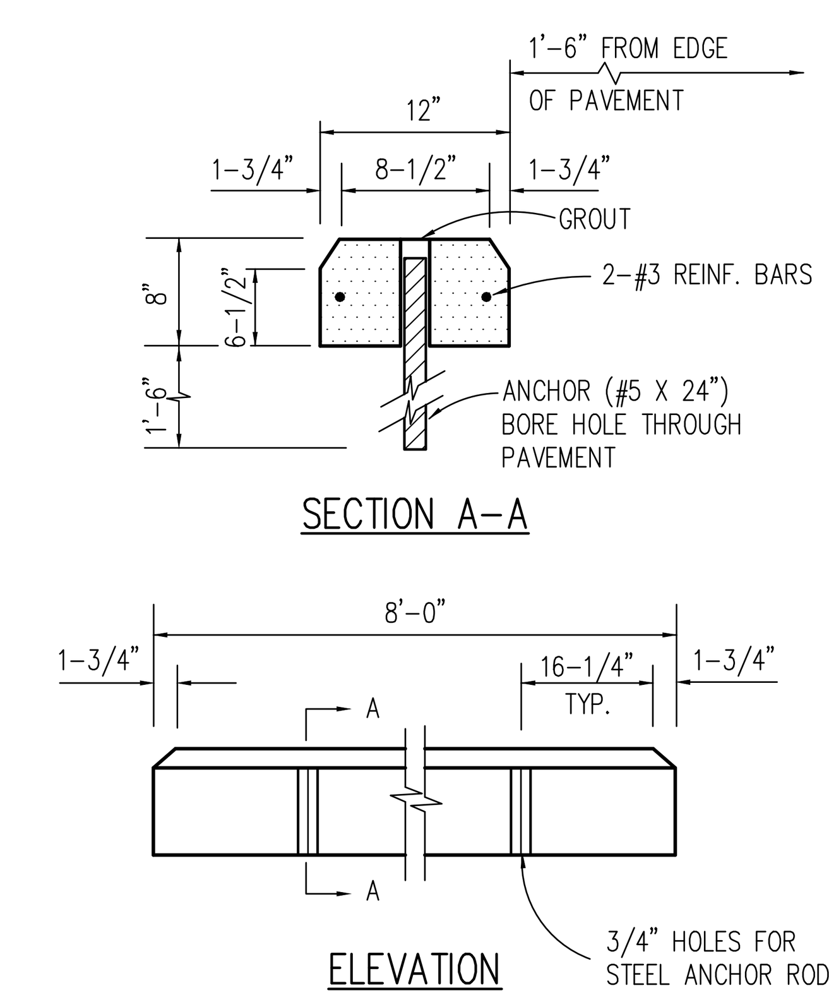

HEAVY DUTY PRECAST CONCRETE WHEEL STOP (4/C801)
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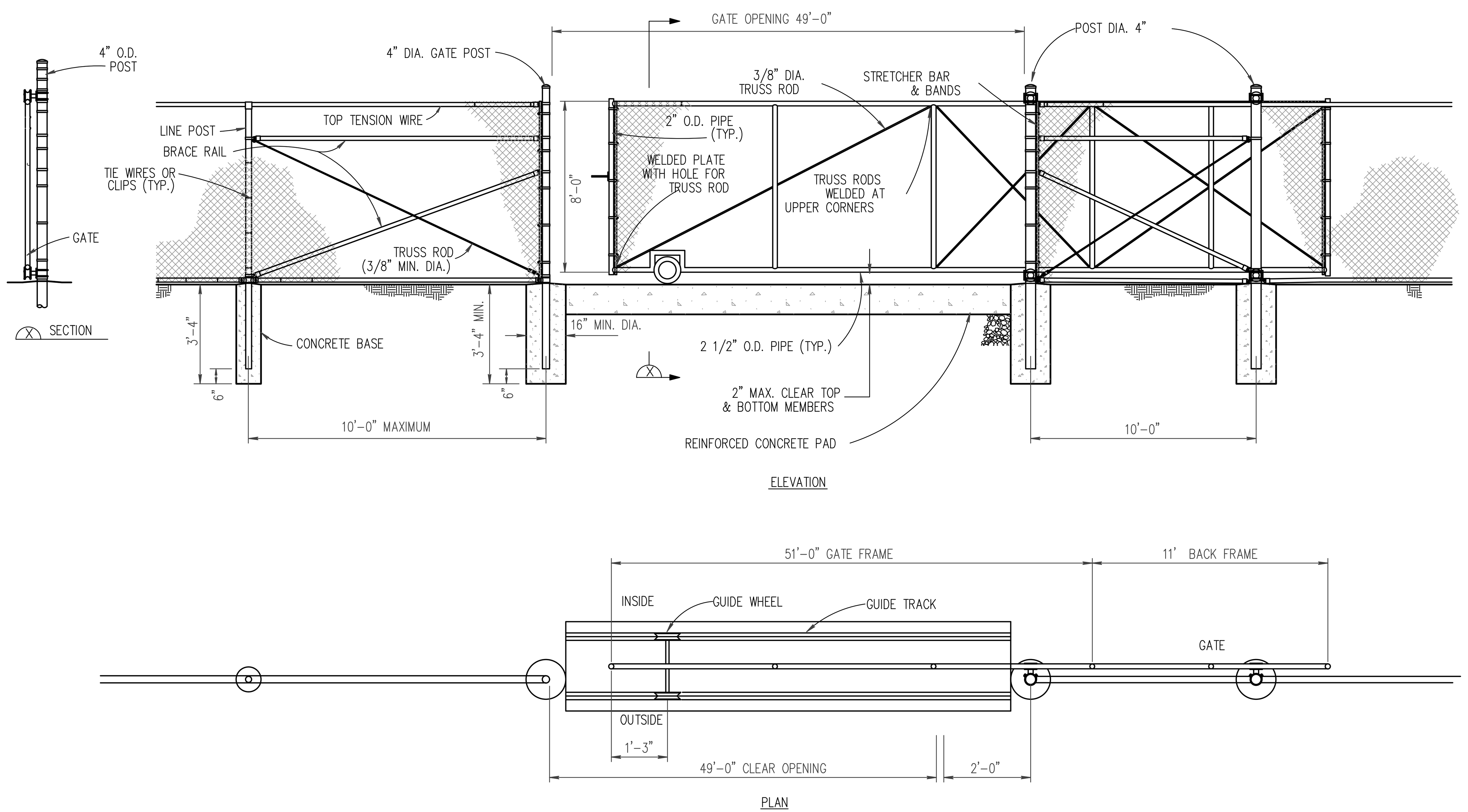
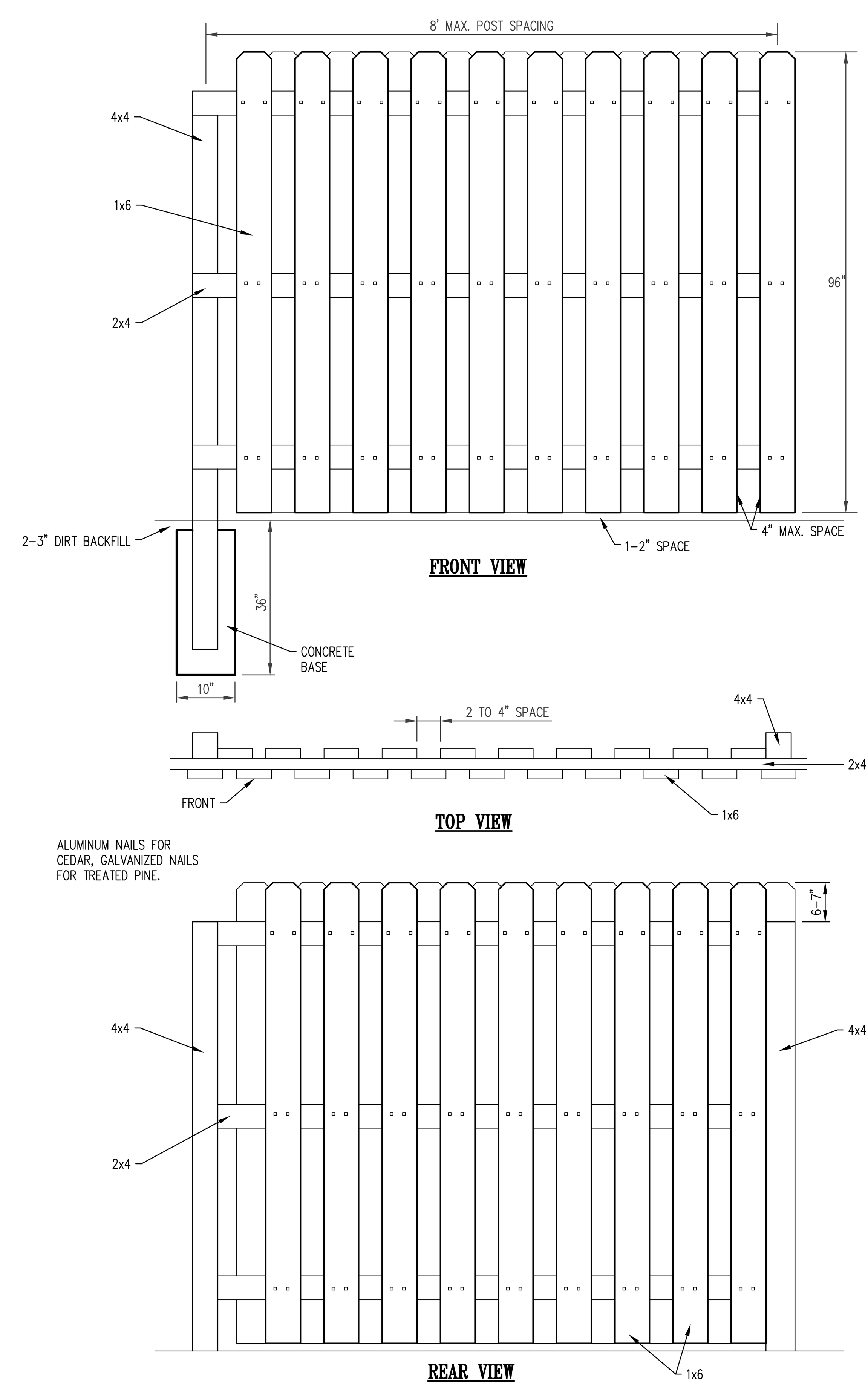


SLIDING GATE DETAIL (8/C801)
NTS



8' WOODEN SHADOWBOX PRIVACY FENCE (9/C801)
NTS

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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
General Site Details

DATE:

DATE: 07/09/2020	DRAWN BY: kwk
ISSUED:	CHECKED BY:

JOB NUMBER: 19111
SHEET # C801

File Path\Name: J:\2019\19111 - CSU O-H Door\Dwgs\C801.dwg - Date: Jul 09,2020 - 3:31pm

SECTION 01000

GENERAL SCOPE OF WORK

1.01 WORK INCLUDED

A. The Contractor shall furnish all labor, services, materials, tools, transportation, and utility services necessary for and incidental to the complete construction of the proposed project, as shown by the plans or as herein specified, or both, including any issued addenda.

B. The work to be done shall not be limited to the exact extent described in the specifications and/or drawings, but shall include all incidental work necessary or customarily done for the completion of the project.

C. PERMITS: The Contractor shall procure and pay for all utility permits not previously obtained by the Owner that are necessary relative to the proposed construction activities.

1.02 SANITARY REGULATIONS

A. The Contractor shall provide adequate sanitary conveniences for the use of those employed on the work, and their use shall be strictly enforced. Such conveniences shall be made available when the first employees arrive on the site, shall be properly secluded from public observation, and shall be constructed and maintained at such points and in such manner as may be approved.

B. The Owner shall have the right to inspect any building erected, maintained or used by the Contractor to determine whether or not the sanitary regulations are in compliance with all applicable codes.

C. The Contractor shall rigorously prohibit the committing of nuisances upon the lands of the Owner or others about the works, or upon adjacent property.

1.03 WATER FOR CONSTRUCTION PURPOSES

A. The Contractor, at his own expense, shall provide all water required for construction or sanitary purposes.

1.04 ELECTRICAL ENERGY

A. The Contractor shall make all necessary applications, arrangements, and pay all fees and charges for electrical energy for power and light required for the proper completion of this contract. The Contractor shall provide and pay for all temporary wiring, switches, connections and meters.

B. There shall be sufficient artificial light by means of electricity so that all work may be done in a workmanlike manner when there is insufficient daylight.

1.05 TEMPORARY HEAT

A. If temporary heat is required for the protection of the work, the Contractor shall provide and install approved heating apparatus, and shall provide adequate and proper fuel and maintain heat as required.

B. Temporary heating apparatus shall be installed and operated in such manner that the finished work will not be damaged thereby.

1.06 MATERIALS, SAMPLES, APPROVAL

A. Unless otherwise indicated on the drawings or specified, only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor, to be incorporated in the work, shall be subject to the inspection and approval by the Engineer prior to installation. No material shall be processed or fabricated for, or delivered to, the work site without being subject to prior approval of the Engineer, except at the risk of the Contractor.

B. The Contractor may be required to submit to the Engineer data relating to materials and equipment the Contractor proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product in question, and to form an opinion as to its conformity to the contract requirements.

C. Facilities and labor for the handling and inspection of all materials and equipment shall be furnished by the Contractor. Defective materials and equipment shall be immediately removed from the site of the work.

D. If the Engineer so requires, either prior to or during the progress of the work, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that such materials conform to the specifications. Such samples shall be furnished, taken, packed, and shipped as directed at the expense of the Contractor. Except as otherwise noted, the Owner shall make arrangements for and pay for the tests.

E. All samples shall be packed so as to reach their destination in good condition and shall be so labeled as to indicate the materials represented, the name of the work and location for which the material is intended, and the name of the Contractor submitting the sample. To insure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. In no case shall said letter of notification be enclosed with the samples.

F. When required, the Contractor shall submit data and samples, or place his orders sufficiently early to permit consideration, inspection, testing, and approval before the materials are necessary for incorporation in the work. Any delay resulting from the Contractors failure to do so shall not be used as a basis of a claim against the Owner or the Engineer.

2.01 APPROVAL OF CONSTRUCTION MATERIALS

A. When required, the Contractor shall submit to the Engineer information regarding the material, manufacturer, any pertinent catalog or model numbers and design criteria of all materials furnished by the Contractor. No such materials shall be installed without the written approval of the Engineer.

B. When required, the Contractor shall furnish to the Engineer, triplicate sworn copies of manufacturer's shop or mill test (or reports from independent testing laboratories) relative to materials and concrete data, equipment performance ratings.

C. After approval of the samples, data, etc., the materials and equipment used on the work shall correspond therewith.

2.02 HANDLING AND DISTRIBUTION

A. The Contractor shall, at his own expense, handle, haul, and distribute all materials, equipment, and all surplus materials on the different portions of the work as required. The Contractor shall provide suitable and adequate storage for materials and equipment during the progress of the work, and be responsible for any loss of, or damage to, materials and equipment furnished or accepted by the Contractor until the final acceptance of the work.

B. Delays in handling involving storage and/or demurrage charges by the railroad company shall be at the exense of the Contractor.

3.01 CONTRACTOR'S SHOP AND WORKING DRAWINGS

A. When required, Contractor shall submit for approval, shop or working drawings for all equipment and materials fabricated for this project and for which drawings are especially requested.

B. When required, material shall be purchased or fabricated for equipment or other features until the Engineer has certified that the shop or working drawings conform to the contract requirements. All materials and work involved in the construction shall then be as represented by said drawings.

C. "DELETED"

D. When required, all shop or working drawings shall be submitted in three copies (unless otherwise specified) to the Engineer through the Contractor. Only drawings which have been checked and corrected by the material fabricator shall be submitted. The Contractor shall be responsible for the prompt submission of all shop or working drawings so that there shall be no delay to the work due to the absence of such drawings. Additional prints of approved drawings shall be furnished, as required.

E. The approval of shop and working drawings, etc., will be general and shall not relieve the Contractor from the responsibility for details of design.

4.01 OCCUPYING PRIVATE LAND

A. The Contractor shall not (except after consent from the proper parties is granted) enter or occupy with men, tools, materials, or equipment any land outside the easements or property of the Owner.

4.02 INTERFERENCE WITH AND PROTECTION OF STREETS

A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits from the proper authorities. If any streets or private way shall be rendered unsafe by the Contractor's operations, the Contractor shall make such repairs or provide such temporary ways and/or guards as shall be acceptable to the Engineer.

B. Streets, roads, private ways, and walks shall be maintained passable by the Contractor at the Contractor's expense. The Contractor shall assume full responsibility for the adequacy and safety of provisions made.

4.03 PROTECTION TO PROPERTY

A. Materials delivered shall be neatly, safely, and compactly piled along the sides of the roadway in which, the improvement is located, adjacent thereto, or as the Engineer may direct, in such manner as to cause the least inconvenience and damage to property and to the general public, and not within five (5) feet of any fire hydrant. Private drives and street crossings shall be kept unobstructed.

B. The Contractor shall be responsible for protecting all existing facilities during the entire period of construction. Any damage to existing facilities caused by the Contractor shall be repaired by the Contractor at his expense and in a manner approved by the Engineer.

5.01 BARRICADES AND PROTECTION

A. The Contractor shall provide proper barricades and rails as directed, not only for the protection of the public generally, but as may be required to prevent intrusion by and possible accident to children and other persons. Danger signals, such as warning signs, red flags and lanterns shall be provided and maintained day and night, as required.

B. The Contractor shall:

C. Protect the excavation and trenches from damage due to rain water, ground water, backing of drains and sewers, and all other water. Provide all pumps and equipment and enclosures to provide such protection.

D. Remove all snow and ice as may be required for the proper protection and/or execution of the work.
Provide and maintain guard lights at all barricades, railings, obstructions in the streets, roads, or sidewalks, and at all trenches or pits adjacent to public walks or roads.

E. Provide protection against weather (i.e. rain, wind, storms, frost, or heat) so as to maintain all work, materials, apparatus, and fixtures from injury or damage.

F. Any work damaged by failure to provide protection, as required above, shall be removed and replaced at the Contractor's expense.

6.01 RESPONSIBILITY TO PROTECT UTILITY INSTALLATIONS

A. The Contractor shall at all times exercise such precautions as may be necessary to protect the Owner from any liability resulting from the damage, injury, or interruption of any utility installations, including gas mains, water mains, power cables, telephone cables, telegraph cables, T.V. cables, storm sewers, or any other such utilities as may be encountered underground or on the surface. In the event any of the Contractor's activities conflict with any of the aforesaid installations in the course of construction, the Contractor shall forthwith notify the Engineer of such conditions, and shall not move any of the aforesaid utility installations without the express written consent of the Owner.

6.02 INSUFFICIENCY OF SAFETY PRECAUTIONS

A. If, at any time, in the opinion of the Engineer, the work is not properly lighted, barricaded, and in all respects safe with respect to public travel, persons on or about the work, or public or private property, the Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as the Engineer deems advisable and, the Contractor shall promptly comply with such orders.

7.01 WORK TO CONFORM

A. All work shall conform during its progress and on its completion truly to the lines, levels, and grades indicated on the drawings, or as provided by the Engineer, and shall be built in a thoroughly substantial and workmanlike manner, in accordance with the plans, specifications, and directions as provided by the Engineer.

B. All work done without instructions having been given therefore by the Engineer, or completed without proper lines or levels shall not be estimated or paid for except when such work is authorized by the Engineer in writing. Work so done may be ordered uncovered, removed, and replaced at the Contractor's sole cost and expense.

8.01 PRECAUTIONS DURING ADVERSE WEATHER

A. During adverse weather the Contractor shall take all necenssary precautions so that the work may be properly performed.

B. During cold weather, materials shall be preheated, as required, and the materials and adjacent structures into which said materials are to be incorporated shall be kept sufficiently warm so that a proper bond shall occur and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by approved means which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture shall be warm throughout when used.

C. The Engineer may suspend construction operations at any time when in his judgment the conditions are unsuitable or the proper precautions are not being taken.

8.02 CUTTING AND PATCHING

A. The Contractor shall leave all chases or openings for the installation of his, or any other contractor's worksite, or shall cut the same in existing work and shall assure that all sleeves or forms are at the work and properly set in ample time to prevent delays. The Contractor shall be responsible that all chases, openings, and sleeves are accurately located, and of proper size and shape.

B. In case of the Contractor's failure to have, or to cut, all such openings and/or have all such sleeves provided and set in proper time, the Contractor shall cut them or set them afterwards at the Contractor's expense, but in so doing shall confine the cutting to the smallest amount possible consistent with the work to be completed. In no case shall piers or structural members be cut without the consent and approval of the Engineer.

C. "DELETED"

D. "DELETED"

8.03 CONTINUITY OF WORK

A. The Contractor must complete the work as it progresses and restore the site of the work as nearly as possible to its original, or proposed, condition as soon as the work is completed.

8.04 LINES, GRADES, MEASUREMENTS

A. The Owner shall employ, at his own expense, a competent surveyor certified as a Professional Registered Land Surveyor in the State of Indiana. Based on reference points and benchmarks to be provided by the Owner, said surveyor shall establish all lines, elevations, reference marks, etc., for the Contractor.

B. A "one-time" staking and cost incurred thereof for all improvements to be performed, per the plans as prepared by Innovative Engineering & Consulting, Inc., shall be provided at the Owner's expense. Any and all costs incurred relative to the restaking of any item, regardless of reason, shall be performed at the Contractor's expense. Be advised that a pre-construction meeting between the Owner and Contractor shall be conducted to determine the method of construction staking and to establish the identity of responsible parties representing each entity relative to construction staking activities.

C. The Contractor shall provide all measurements and confirm all dimensions necessary for the proper construction of the work called for by the drawings and specifications. During the prosecution of the work, the Contractor shall make all necessary measurements to prevent any misfitting. The Contractor shall be responsible for the accurate construction of all proposed improvements.

D. Adjustment of grades shown on drawings may be necessary to conform to actual field conditions or to maintain cover with respect to proposed grades. Such adjustments shall be considered part of the job conditions and no extra compensation shall be allowed for such changes, except where specifically otherwise noted in the plans and specifications. Such adjustments must be approved by the Engineer prior to being performed.

8.05 RECORD DOCUMENTS

A. Description

1. Definitions: Record copies are defined to include those documents relating directly to performance of the work which the Contractor is required to prepare for the Owner's records. Record copies shall indicate all revisions in the work from that shown and specified by original contract documents; and provide additional information of value to Owner's records, but not indicated by original contract documents. Record copies include newly prepared drawings, "marked-up" copies of contract drawings, shop drawings, specifications, addenda and change orders, "marked-up" product data submittals, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information or work which is otherwise recorded only schematically, or not at all. Certain individual sections of these specifications may indicate specific record copy requirements which extend the requirements of this section.

2. As required, provide accurate survey information indicating locations and elevations of all underground utility lines, including elevations, location, and change of direction of piping, conduit, valves, fittings, tanks and manholes.

A. Record Product Data

B. As required and during progress of the work, the Contractor shall maintain one copy of each product data submittal, and mark up significant variations in the actual work in comparison with submitted information. Include both variations in product as delivered to the site, and variations from manufacturer's instructions and recommendations for installation. Identify concealed products and portions of the work which cannot be identified after concealment. Note related change orders and mark up or record drawings and specifications. Upon completion of mark-up, submit complete sets to the Engineer for Owner's records. Label each data submittal "AS-BUILT" in 1-1/2-inch high letters.

8.07 SITE CLEAN-UP AND RESTORATION

A. In addition to the cleaning requirements set forth in the "General Conditions", the Contractor shall keep the working area free at all times of tools, materials and equipment not essential to the progress of the work. Debris, waste materials, and rubbish shall be properly disposed of and not allowed to accumulate. If the Contractor should fail to do this, the Owner shall make the necessary arrangements to effect the clean-up by others and shall back charge the cost to the Contractor. If such action becomes necessary on the part and in the opinion of the Owner, the Owner will not be responsible for the inadvertent removal of material which the Contractor would not have disposed of had the Contractor affected the required clean up.

B. Where material or debris has washed, flowed into, or been placed in watercourses, ditches, gutters, drains, catch-basins, or elsewhere as result of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, etc., kept in a clean and neat condition.

C. On or before the completion of the work, the Contractor shall, unless otherwise directed or permitted in writing by the Owner, tear down and remove all temporary buildings and structures built by the Contractor; shall remove all temporary works, tools, and machinery or other construction equipment furnished by the Contractor; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by the Contractor; shall remove all rubbish from any grounds which the Contractor has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by the Contractor's operations in a neat and satisfactory condition.

D. The Contractor shall restore or replace, when and as directed, any public or private property damaged by the Contractor's work, equipment, and/or employees to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration.

E. The Contractor shall thoroughly clean all materials and equipment installed and upon completion of the work shall deliver the site in its proposed condition and new appearing condition.

SECTION 01090

REFERENCE STANDARDS

1.01 SCOPE

A. The Contractor, all subcontractors, equipment and material suppliers shall ensure that construction, installation, equipment, products and materials, shall conform to the requirements and specifications of the latest printed edition of the following standards and codes, as applicable, including, but not limited to:

AASHTO American Association of State Highway & Transportation Officials
ACI American Concrete Institute
AIA American Institute of Architects
AISC American Institute of Steel Construction, Inc.
AISI American Iron and Steel Institute
ANSI American National Standards Institute, Inc.
APWA American Public Works Association
ASCE American Society of Civil Engineers
ASSE American Society of Sanitary Engineers
ASTM American Society for Testing & Materials
AWS American Welding Society
AWWA American Water Works Association
BOCA BOCA National Plumbing Code
CS Commercial Standards
FCI Fluids Control Institute
FM Factory Mutual
FS Federal Specifications
IOSHA Indiana Occupational Safety & Health Act
ISBH On Site Water Supply & Wastewater Disposal for Public & Commercial Establishments, Bulletin S.E. 13
InDOT Indiana Department of Transportation
MSWSCI Model Specifications for Water and Sewer Construction in Indiana
NAAMM National Association of Architectural Metal Manufacturing
NEC National Electric Code
NFPA National Fire Protection Association
NEMA National Electric Manufacturers
NSB National Bureau of Standards Engineers
NSF National Sanitation Foundation
NSPE National Society of Professional
OSHA Occupational Safety & Health Act
PPI Plastic Pipe Institute
Recommended Standards for Sewage Works
Recommended Standards for Water Works
UBC Uniform Building Code
UL Underwriters Laboratory, Inc.
UMC Uniform Mechanical Code
UNI-Bell Uni-Bell PVC Pipe Association
UPC Uniform Plumbing Code
USPS US Product Standards
WPCF Water Pollution Control Federation

2.01 SUBMITTALS

A. If more than one specification applies to any one particular material, product, product model, or installation, the Contractor shall consult with the Engineer to determine the applicable specification or standard.

SECTION 01100

PROJECT DESCRIPTION

PART 1 – GENERAL

1.01 SCOPE

A. The Contractor shall perform all work required to complete the project in accordance with the drawings and specifications as prepared by Innovative Engineering & Consulting, Inc., and shall provide and furnish all labor, materials, tools, equipment, transportation, services and supervision to install all items of construction.

B. The Contractor shall thoroughly familiarize himself with the Contract Documents, Local, State and Federal Laws and Ordinances and all other matters which can in any way affect the work as proposed by the plans as prepared by Innovative Engineering & Consulting, Inc.

C. The Contractor shall be responsible for verifying that all required permits and approvals have been obtained from the respective Town, County, Conservancy, and State agencies prior to the commencement of any construction activities.

D. It shall be the Contractor's responsibility to determine the exact location of all existing utilities in the vicinity of the construction area prior to the commencement of any construction activity.

E. It shall be the Contractor's responsibility for notification and coordination of all construction activities with the respective utility companies.

F. It shall be the responsibility of the Developer and Contractor to maintain quality control throughout the project. Failure to do so may result in removal and replacement of the defective work. It is required that the Contractor have a qualified Superintendent on the job site at all times during construction.

G. It is essential that the work to be done in conjunction with this project be installed according to these plans and specifications. Innovative Engineering & Consulting, Inc. shall be required to certify to certain portions of this project upon completion; therefore, to obtain approval and acceptance by all appropriate agencies, documentation shall be required to confirm that improvements performed are in substantial compliance with these plans and specifications.

1.02 PROJECT DESCRIPTION

A. The project shall consist of earthwork and grading operations, the construction of roads, curbs, all associated work as shown on the drawings, and as indicated in the specifications as prepared by Innovative Engineering & Consulting Inc.

SECTION 01065

REGULATORY REQUIREMENTS

1.01 SCOPE

A. The Contractor shall comply with all applicable Federal, State and Local Codes, including but not limited to:

1. Occupational Safety & Health Act of 1970, as amended
2. The National Electric Code
3. National Electric Safety Code
4. Uniform Building Code, latest edition
5. Life Safety Code
6. National Fire Protection Association Code, latest edition
7. The BOAC National Plumbing Code, latest edition
8. Indiana Plumbing Code, latest edition

B. All work performed, materials furnished, or equipment supplied and installed under this project shall conform to all requirements of the Indiana Department of Environmental Management, to the Recommended Standards for Water Works ("10 State Standards"), current edition, and all Federal requirements relating to water facilities.

C. All work shall comply with all utility regulations.

SECTION 01500

TEMPORARY FACILITIES

PART 1 – GENERAL

1.01 DESCRIPTION

A. The Contractor shall provide the following temporary facilities:

1. Sanitary facilities.
2. Barricades and enclosures.
3. Field office (Contractor's option).
4. Telephone services.
5. Utility connections, maintenance & removal.

B. Temporary structures required by Subcontractors, for storage or other purposes in the performance of their contracts, shall be located and erected only with the approval of Engineer and shall be removed and premises cleaned of all debris when directed.

C. The Contractor shall furnish and pay cost of power.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

A. Obtain and pay for permits as required by authorities.

B. Comply with all applicable Federal, State, and Local Codes, including but not limited to:

1. Occupational Safety and Health Act of 1970, as amended.
2. National Electric Code.
3. National Electric Safety Code.
4. Uniform Building Code, latest edition.
5. Life Safety Code.

C. Comply with utility regulations.

PART 2 – PRODUCTS

2.01 TEMPORARY STRUCTURES (When Provided)

A. Storage Sheds:

1. Provided by each Subcontractor, as required.
2. Coordinate location and removal with General Contractor.

B. Enclosures:

C. Provide temporary weather tight enclosures for all exterior openings.

D. Equip exterior doors with locks and closures.

E. Provide lights, signs and barricades as required to protect construction personnel and the general public.

F. Sanitary Facilities:

G. Provide and maintain, in sanitary condition, approved type temporary toilet facilities. Toilets shall be portable type equal to Sanipep units.

2. Remove temporary toilets upon completion of work.

E. Field Offices:

1. Furnish, install, and maintain field office.
2. General Contractor's offices required for general use and project meetings.
3. Option: portable trailer units.
4. Adequate office equipment for construction coordination and shop drawing storage.
5. Automatic heating and ventilating equipment.
6. Emergency first-aid equipment, ABC fire extinguisher and extra hard hats.
7. Drinking water supply.
8. Telephone with loud outside gong.
9. Provide locks on doors.

2.02 TEMPORARY UTILITIES

A. Temporary Electricity and Water

1. The Contractor shall at his expense arrange for the provision, distribution, and continuance throughout the Work of temporary electrical power. All elements of such electrical service shall conform to the regulations of the National Electric Code and the Safety Code for the Construction Industry. All temporary wiring shall include a green equipment grounding conductor, and the entire temporary electrical service shall have equipment grounding continuity; all outlets for the connection of portable equipment shall be of the grounding type. Contractor and subcontractors shall be responsible for all necessary wiring and extension cords to reach from the nearest outlet of adequate capacity to the point of operation; all such devices shall conform to the requirements specified herein.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Temporary Structures

1. Locate to avoid interference with work.
2. Relocate as required and/or directed by Designer.
3. Construct on stable foundation with code approved service connections.

B. Temporary Electrical Services:

1. Service and distribution may be overhead or underground.
2. Locate lighting controls at entrance to each area.
3. Do not run branch circuits on floor.

3.02 PROTECTION

A. Safety: Maintain lights and barricades on all obstructions and hazards during construction of the project in conformance with Federal and local laws and codes.

B. Fire Protection:

1. Provide multi-purpose dry chemical fire extinguisher at each building.

2. Mount units in protective red enclosures plainly marked and readily accessible.

Innovative
ENGINEERING & CONSULTING
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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana
General Specifications

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE:	DRAWN BY:
07/09/2020	ANR
ISSUED:	CHECKED BY:

JOB NUMBER: 19111

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SECTION 02100

SITE WORK

PART 1 – GENERAL

1.01 SCOPE

A. The work performed under this section includes, but is not limited to, the work necessary to prepare the site for execution of the project.

B. The Contractor shall supply all labor, materials and equipment necessary for proper execution.

PART 2 – PRODUCTS

2.01 NOT APPLICABLE

PART 3 – EXECUTION

3.01 PREPARATION

A. Prior to any clearing operations, the Contractor shall stake the clearing limits arrived at after consultation with the Developer/ Owner. Trees to remain within the clearing limits shall be clearly marked.

B. Prior to any excavation, Contractor shall field locate all electrical, water lines, natural gas pipe lines, sewer lines, cable TV, underground telephone cables, etc. Any damage to existing buried utilities shall be properly corrected at the Contractor's expense.

C. When construction is to be executed in developed areas and reconstruction of existing facilities (streets, curbs, driveways, sidewalks, parkways, etc.), the Contractor shall photograph log the site prior to any disturbance of existing facilities.

3.02 PROTECTION

A. Protect existing trees and shrubbery to remain.

1. Protect tops, trunks and roots of existing trees on the project site that are to remain.
2. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before work is started.
3. Do not permit heavy equipment or stockpiles within branch spread.
4. Remove interfering branches without injury to trunks and cover scars with asphaltum base tree paint.

B. The Contractor shall use extreme care to protect existing pavement, curb and gutters, driveways and parkways. The Contractor shall be held responsible for all damages and repair or replace any damages, at the Contractor's expense, to the satisfaction of the Engineer or as specified in these documents.

3.03 TRIMMING

A. Remove interfering branches without injury to trunks and apply tree wound dressing to all cuts over two (2) inches in diameter.

B. Trimming shall be in accordance with good tree surgical practice.

3.04 CLEARING

A. Remove trees, saplings, shrubs, bushes, undergrowth, etc., within limits of clearing.

B. Removal of trees:

1. All trees three inches (3") in diameter and larger shall be trimmed of branches, cut into 8' to 10' lengths and stored on the site where directed by the Engineer and shall remain on the property of the Owner.

2. All trees, branches and shrubs less than three inches (3") in diameter may be processed with a mechanical chipper and stock-piled where directed by the Engineer, or may be disposed of by the Contractor away from the Owner's property, at the Contractor's option.

C. Remove existing bituminous pavement to its entire depth from areas to be covered with new construction and dispose of debris off the site. Debris shall not be used for filling, backfilling, or any other purpose in the construction.

D. Comply with the applicable laws and ordinances governing the disposal of materials, rubbish and trash.

E. No burning allowed on the site. No onsite trash or rubbish burial allowed unless otherwise approved by the Owner.

F. Take care to keep nuisance of trash, noise and dust at a minimum.

G. Repair all damage inflicted to areas which are not to receive excavation work, or replace as required.

H. To avoid maintenance problems, root systems shall remain intact in areas where erosion is likely.

I. Remove all debris immediately from the Owner's property.

3.05 GRUBBING

A. Remove stumps, roots larger than 1-1/2" diameter, vegetation and boulders within the construction limit.

B. All tree stumps to be removed to the following depth:

If within paved areas:	24" below subgrade.
If within lawn areas:	24" below finish grade.
If within building areas:	36" below subgrade.

C. Strip all topsoil to its entire depth of the construction area, minimum of 6" depth.

1. Do not use top soil for subgrade fill.
2. Stockpile topsoil for use in finish grading operations in approved areas where indicated on the drawings, or as determined by the Owner.
3. Areas to be stripped shall first be scraped clean of all brush, weeds, grass, roots, and other materials that will interfere with lawn maintenance.
4. Topsoil shall be reasonably free from subsoil, debris, and stones larger than 2" in diameter.

SECTION 02200

EARTHWORK

PART 1 – GENERAL

1.01 SCOPE

A. The work performed under this Section includes, but is not necessarily limited to: foundations, backfilling, fill compaction, rough and finish grading, as indicated on the drawings, and as herein specified.

1.03 SUBMITTALS

Reports of all tests to Engineers.

1.04 BENCHMARKS AND MONUMENTS

A. Maintain all benchmarks, monuments, and other reference points, if destroyed or disturbed, replace as directed, at Contractor's expense.

1.05 SITE GRADING

A. The Contractor shall perform all grading operations to bring subgrades, after final compaction, to the required grades and sections as proposed per the construction plans as prepared by Innovative Engineering & Consulting, Inc.

B. Subgrade shall be proof rolled with the suitable equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.

C. Subgrade for streets and pavement areas shall be prepared in compliance with INDOT and Jurisdictional Standard Specifications for all areas of street construction. Subgrade shall be compacted to 100% of Standard Proctor in the upper 6" of depth. Depths of embankment below the upper 6" shall be compacted to 95% of Standard Proctor.

D. See Plainfield Town Standards.

E. All fill material shall be formed from soil free of deleterious material. Prior to placement of fill, a sample of the proposed fill material shall be submitted to a designated Soils Engineer for approval. The fill material should be placed in layers not to exceed eight (8") inches in loose thickness, and shall be spread and dried to a moisture content which will permit proper compaction.

F. All fill material in areas outside of building and pavement areas shall be compacted lightly and protected from erosion. Areas of building construction shall not have unsuitable material placed in said location, and fill shall be compacted in accordance with the Soils Engineer's specifications (minimum of 95% Standard Proctor). Such areas shall be determined by the Owner's representative.

1.06 PROTECTION

A. Protect newly graded areas from the action of the elements. Any settlement or washing that occurs prior to acceptance of the work shall be repaired and grades re-established to the required elevations and slopes. Fill to required subgrade levels any areas where settlement occurs.

1.07 DISPOSITION OF UTILITIES

A. Active utilities shall be protected from damage and removed or relocated only as indicated or specified. Where active utilities are encountered but are not shown on the drawings, the Engineer shall be advised. The work shall be adequately protected, supported or relocated as directed by the Utility and Engineer.

B. Inactive and abandoned utilities encountered in excavating and grading operations shall be reported to the Engineer. In absence of specific requirements, plug or cap such utility lines at least three feet outside of new work or as required by local regulations.

PART 2 – EXECUTION

2.01 GRADING

A. Furnish, operate and maintain such equipment and materials as necessary to control uniform layers, section and smoothness of grade for maximum compaction, drainage, erosion and sediment control.

B. Rough Grading

1. Evenly grade to elevation 6 inches below finish grade elevations indicated.
2. Protect all constructed items during grading operations, and repair if damaged.
3. All areas in the project, including excavated and filled sections and adjacent transition areas, shall be reasonably smooth, compacted and free from irregular surface changes.
4. The degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations, except as otherwise specified.
5. The finished subgrade surface generally shall be not more than 0.10 feet above or below the established grade or approved cross-section, with due allowance for topsoil and sod where required.
6. The tolerance for areas within 10 feet of buildings shall not exceed 0.15 feet above or below the established subgrade.
7. All ditches, swales and gutters shall be finished to drain readily.
8. Unless otherwise indicated on the drawings, the subgrade shall be evenly sloped to provide drainage away from sanitary manhole structures.
9. Provide roundings at top and bottom of banks and at other breaks in grade.
10. The provisions regarding rock excavation set forth forth under Section 02223, shall apply equally to rock excavation in areas outside of sewer trenches. If rock is encountered, it shall be removed to depths as follows:

    a. Under surfaced areas: to underside of surfacing or base course.

    b. Under lawns and planted areas: to 24" below finished grade, unless otherwise approved by the Engineer.

C. Finish Grading

1. Proceed to finish elevations indicated.
2. Rake subsoil clean of stones and debris. Scarify to depth of 3".
3. Spread top soil over prepared subgrade to a minimum depth of 6", and rolled until suitable for seeding.
4. Finish grade shall comply with the site grades provided per the "Grading Plan".
5. Leave topsoil ready to be seeded.

D. Protection

1. Protect newly graded areas from the action of the elements.
2. Any settlement or washing that occurs prior to acceptance of the work shall be repaired, and grades re-established to the required elevations and slopes.
3. Fill to required subgrade levels any areas where settlement occurs.

PAVEMENT CONSTRUCTION

See Plainfield Town Standards

SANITARY SEWER CONSTRUCTION

See Plainfield Town Standards

WATERMAIN CONSTRUCTION

See Plainfield Town Standards

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REVISIONS:

PREPARED FOR:
C.S.U. INC.
3919 CLARKS CREEK ROAD
Plainfield, IN 46168
314-972-0802

C.S.U. OUTDOOR STORAGE & PARKING LOT EXPANSION
Plainfield, Indiana

General Specifications

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE:	DRAWN BY:
07/09/2020	ANR
ISSUED:	CHECKED BY:

JOB NUMBER: 19111

SHEET # C902

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