

# Lions Trans Inc. Maintenance Building

## 4005 N. County Road 1000E

### Brownsburg, Indiana 46112

#### Owner:

Malhi Kulwinder & Jigna Shah Jtsur  
 7631 E. US Hwy 36  
 Avon, Indiana 46123  
 Phone: 317-989-1580

#### Civil Engineer:

Moench Engineering, P.C.  
 4000 Clarks Creek Road  
 Plainfield, Indiana 46168  
 Phone: (317) 837-2767  
 Fax: (317) 837-7266

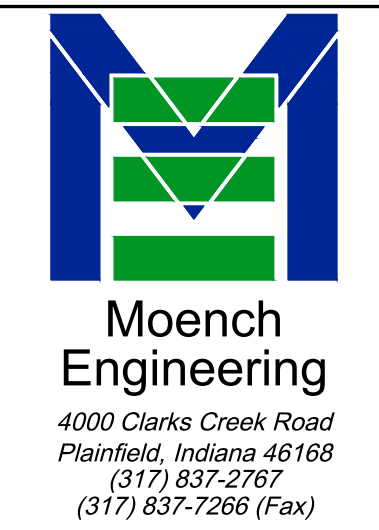
#### Jurisdictional Contact:

Town of Brownsburg Development Services  
 61 N. Green St.  
 Brownsburg, Indiana 46112  
 Phone: (317) 852-1128

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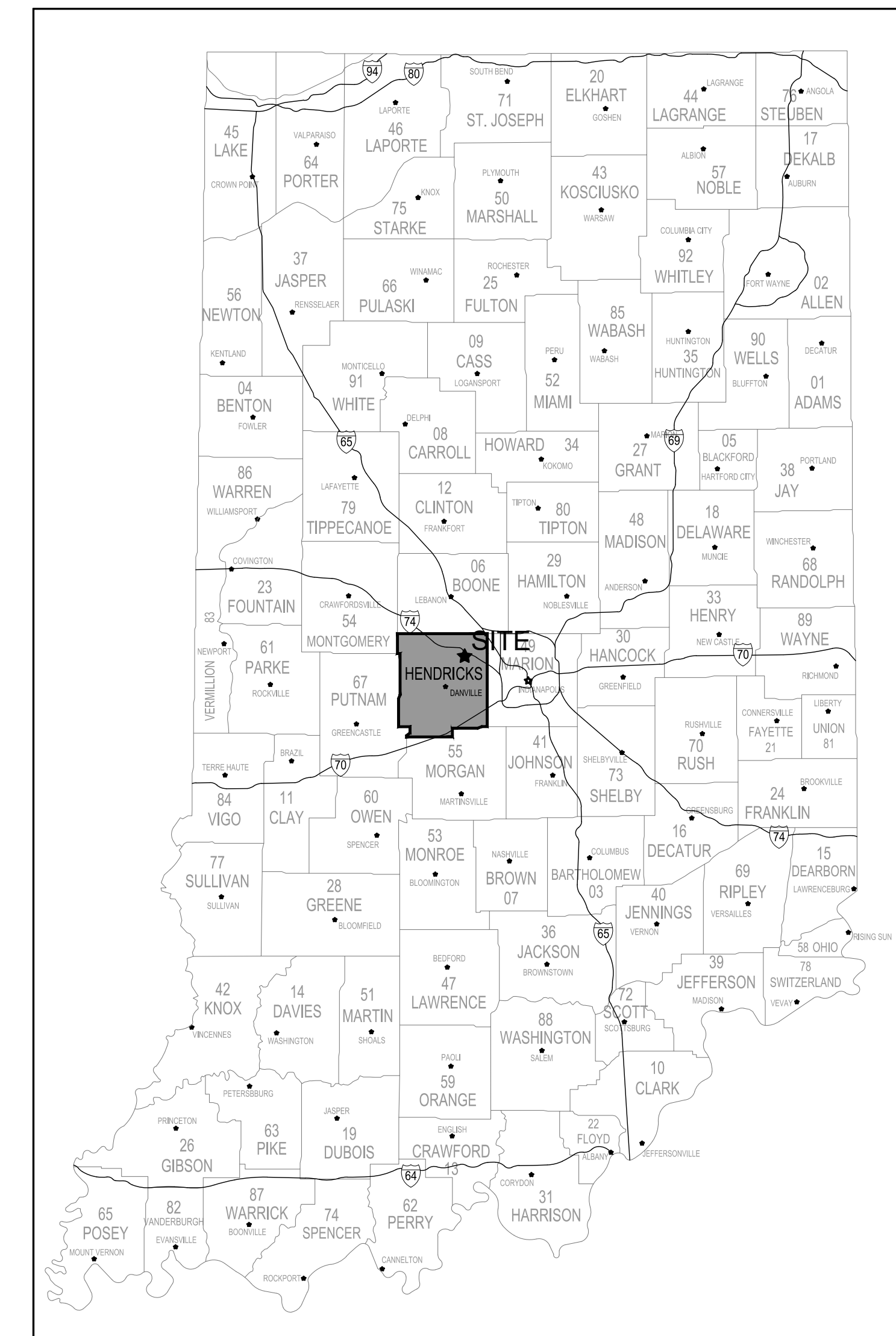
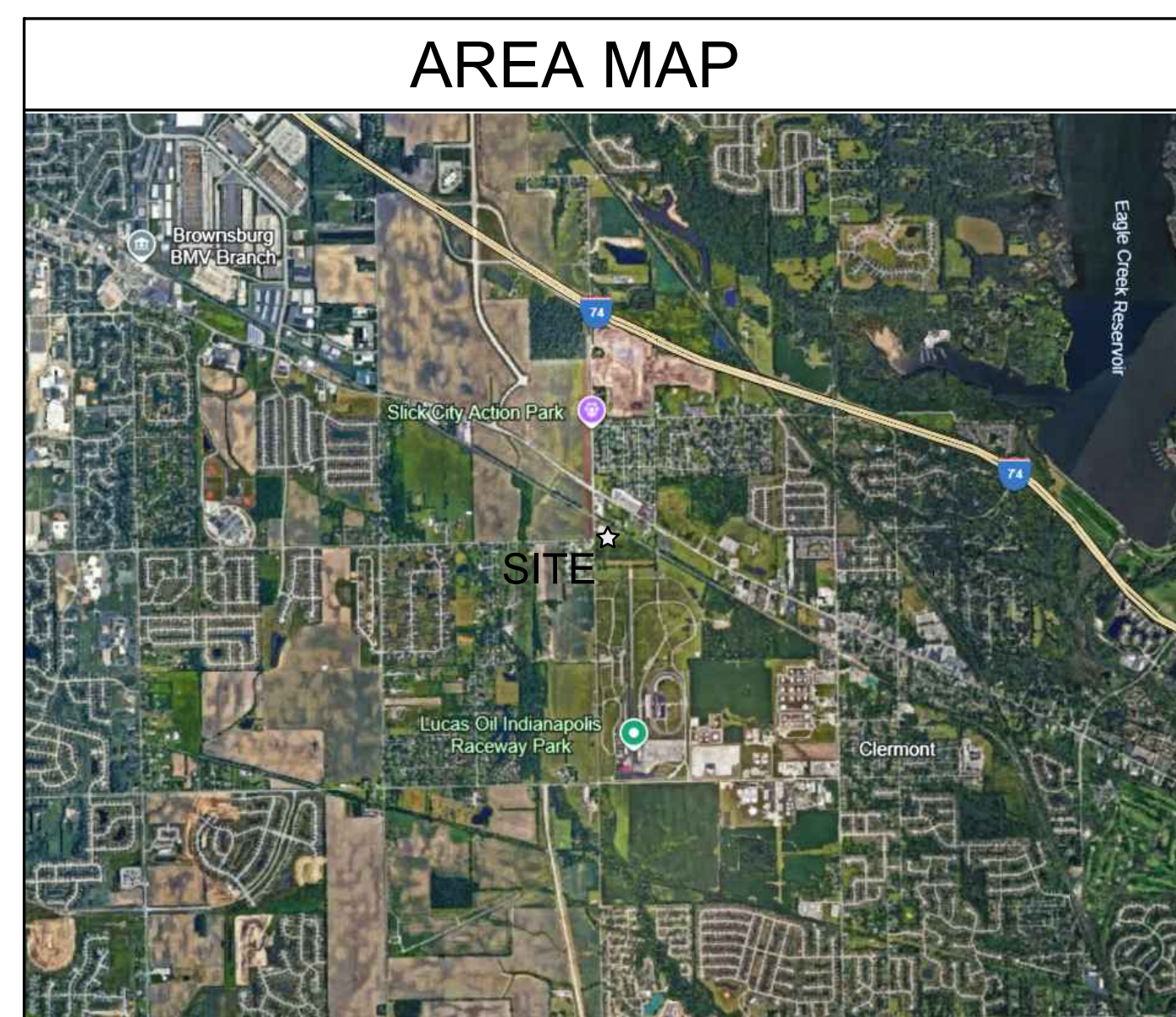
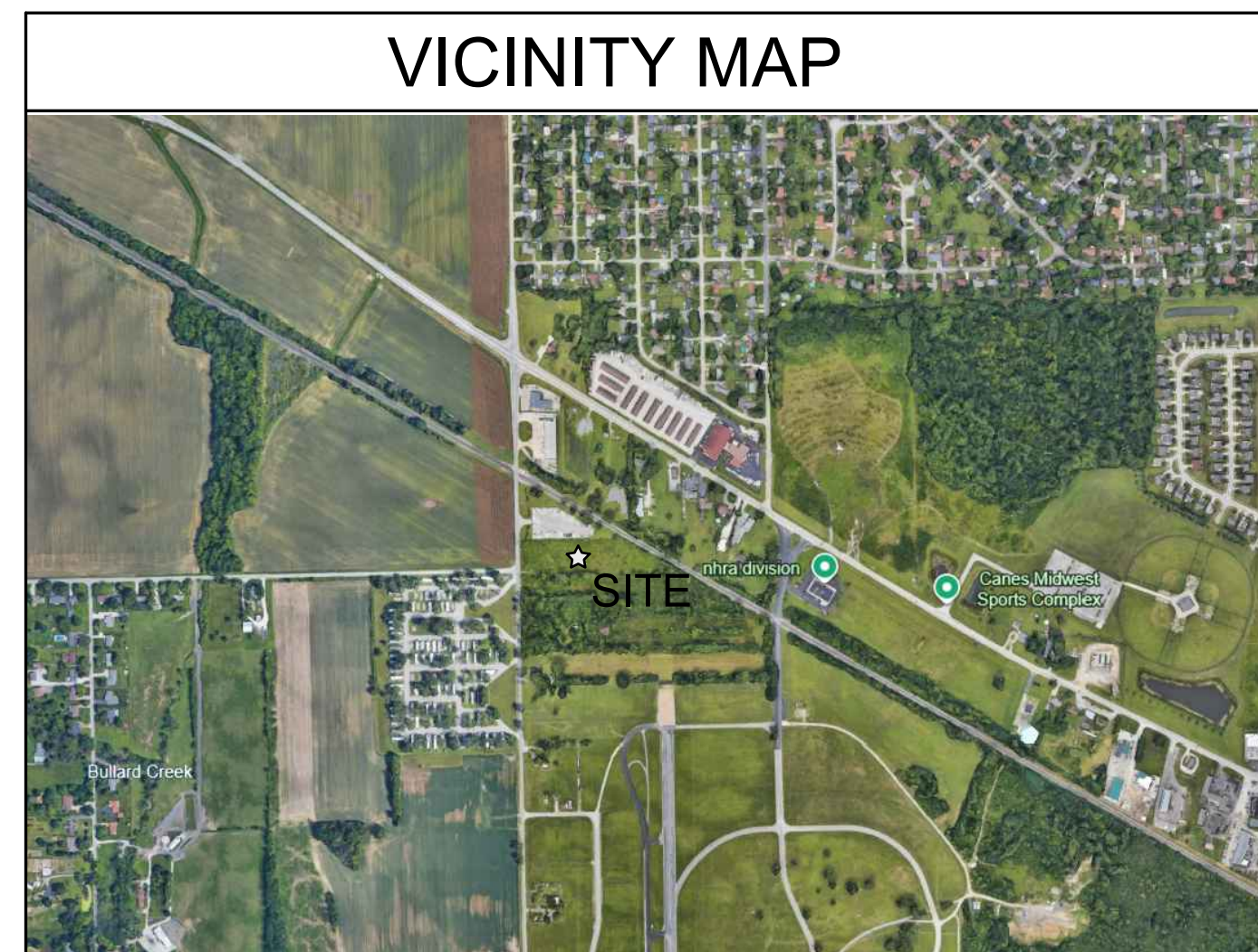
SITE ANALYSIS TABLE	
ZONING	MS
BUILDING TYPE	(1) OFFICE, (2) SHOP/GARAGE
NUMBER OF BUILDINGS	2
BUILDING HEIGHT	30'-0"
TOTAL PARCEL	3.07 Acres
TOTAL DISTURBED AREA	2.60 Acres
TOTAL PARKING REQUIRED	N/A
PARKING RATIO	1.1 space / employee & 1 visitor space / 10 employee spaces
TRUCK PARKING SPACES PROVIDED (10.5x70')	31
STANDARD (9.5' x 18') SPACES	4
HANDICAPPED SPACES	1
TOTAL SPACES PROVIDED	36
TOTAL BUILDING SQUARE FOOTAGE	3760 s.f.

LOT COVERAGE			
	AREA (sq ft)	ACRES	PERCENT
ASPHALT	83,071	1.907	62%
BUILDINGS	3,760	0.086	2.8%
SIDEWALK	716	0.016	0.5%
IMPERV. (TOTAL)	87,547	2.01	65.4%
PERVIOUS	46,327	1.06	34.6%
LOT TOTAL	133,874	3.07	100%



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**SUBJECT SITE:**  
 SITE LOCATED IN LINCOLN TOWNSHIP  
 HENDRICKS COUNTY, INDIANA  
 (39°49'21" N and 86°20'42" W)



LIONS TRANS INC. (BROWNSBURG)

4005 N CR 1000 E  
 BROWNSBURG, IN 46122

COVER SHEET



REVISIONS:		
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	1/12/22
3	REVISED per TOWN COMMENTS	9/09/24
4	REVISED per TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22

SHEET NUMBER:  
**C000**

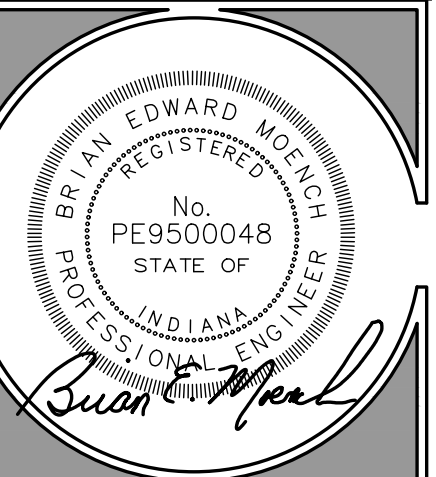


**Moench Engineering**  
 4000 Clarks Creek Road  
 Plainfield, Indiana 46168  
 (317) 837-2767  
 (317) 837-7266 (Fax)

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**LIONS TRANS INC. (BROWNSBURG)**  
 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**OFFSITE DEMOLITION PLAN**



**REVISIONS:**

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**D101**

**PROTECTION AND DEMOLITION NOTES:**

**TREE REMOVAL AND PROTECTION:**

- TREES SHALL BE REMOVED FROM THE PROJECT ONLY WHERE THE AREA IS TO BE OCCUPIED BY ROAD, SURFACED AREAS, OR DRAINAGE SWALES.
- TREES SHALL BE REMOVED FROM THE PROJECT SITE WHERE THEY INTERFERE DIRECTLY WITH THE PLACEMENT OF STORM OR SANITARY SEWERS AND THAT SUCH EXCAVATION WILL BE FATAL TO TREES.
- THE CONTRACTOR SHALL ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNATED. IN THE EVENT CUT OR FILL EXCEEDS 0.5 FEET OVER THE ROOT AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURES TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE METHOD FOR PROTECTION OF TOPS, TRUNKS AND ROOTS OF EXISTING TREES ON THE PROJECT SITE THAT ARE TO REMAIN. EXISTING TREES SUBJECT TO CONSTRUCTION DAMAGE SHALL BE BOXED, FENCED OR OTHER MATERIAL AND EQUIPMENT SHALL NOT BE STOCKPILED OR STORED WITHIN THE SPREAD OF BRANCHES. BRANCHES WHICH NEED TO BE REMOVED OR ARE BROKEN SHALL BE NEATLY TRIMMED AND SCARS SHALL BE COVERED WITH TREE PAINT.

**CLEARING AND GRUBBING:**

- CLEARING AND GRUBBING SHALL CONSIST OF CUTTING, REMOVING AND SATISFACTORY DISPOSING OF ALL TREES, BRUSH, PROJECTING ROOTS, STUMPS, RUBBISH, BROKEN PAVEMENT, BROKEN CONCRETE, FENCING (AS DESIGNATED) AND OTHER MATERIALS ON THE PROJECT SITE AND WITHIN THE BOUNDARY AS SHOWN ON THE CONSTRUCTION DOCUMENTS AND / OR DESIGNATED BY THE CONSTRUCTION LIMITS.
- ALL "UNSUITABLE MATERIAL" FROM CLEARING OPERATIONS SHALL BE REMOVED TO DISPOSAL AREAS AS DIRECTED BY GENERAL CONTRACTOR.

**STRIPPING OF TOPSOIL:**

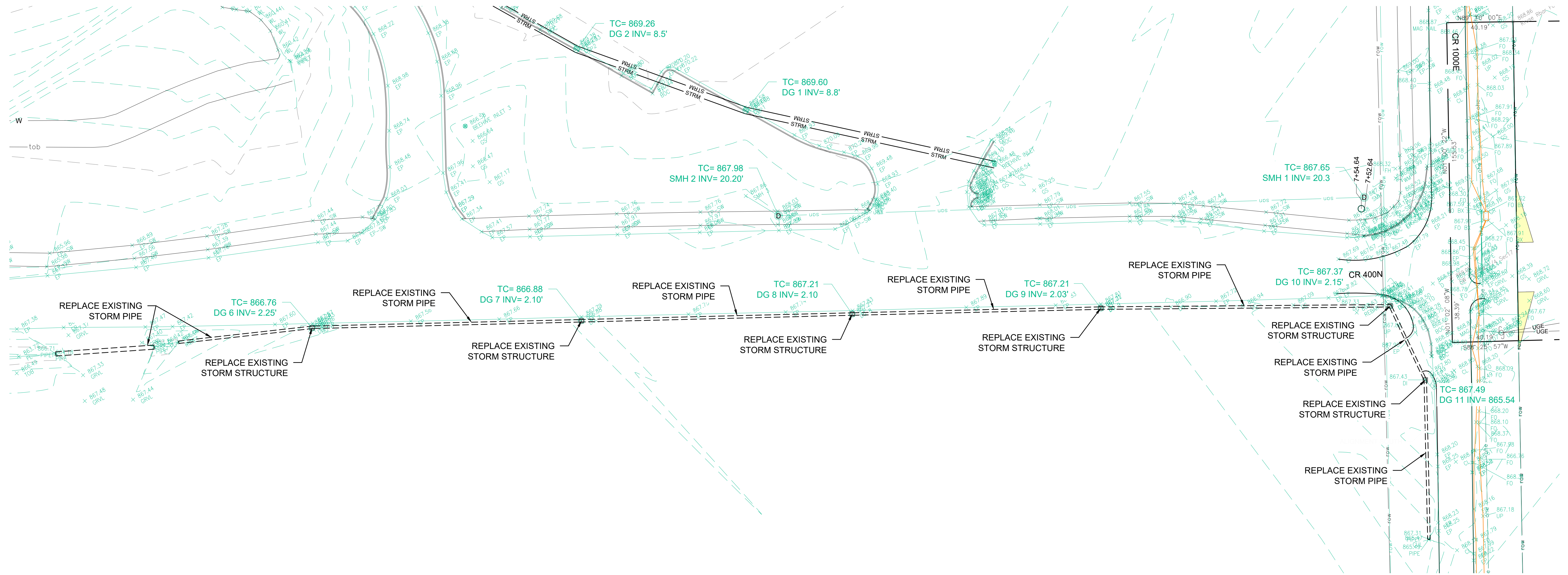
- THE CONTRACTOR SHALL VERIFY THAT ALL TOPSOIL HAS BEEN REMOVED IN THE AREAS TO BE OCCUPIED BY ROADS, WALKS AND DESIGNATED BUILDING AREAS. TOPSOIL SHALL BE REMOVED TO A DEPTH OF SIX (6) INCHES OR DEEPER, IF NECESSARY, TO REMOVE ORGANIC MATTER WHERE REQUIRED.
- TOPSOIL SHALL BE KEPT SEPARATED FROM SUITABLE FILL MATERIALS AND SHALL NOT BE USED AS FILL UNDER PAVEMENT, BUILDING AREAS AND / OR FUTURE STRUCTURAL AREAS.
- TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT DOES NOT INTERFERE WITH CONSTRUCTION OPERATIONS AS DIRECTED BY THE GENERAL CONTRACTOR.
- TOPSOIL SHALL BE REASONABLY FREE FROM SUBSOIL, DEBRIS AND STONES.

**DEMOLITION:**

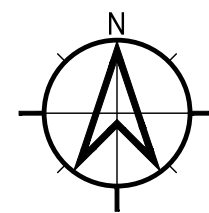
- ALL MATERIAL AS A RESULT OF THE GENERAL DEMOLITION SHALL BE THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR'S LUMP SUM BID PRICE FOR THE DEMOLITION SHALL TAKE INTO ACCOUNT THE SALVAGEABLE VALUE OF MATERIALS AND SAID BID PRICE SHALL REFLECT SAID DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN FROM ALL APPLICABLE GOVERNMENT AUTHORITIES NECESSARY PERMITS REQUIRED. A COPY OF SUCH PERMITS TO BE FURNISHED TO THE OWNER PRIOR TO COMMENCEMENT OF ANY WORK HEREIN.

**STONE REMOVAL:**

- EXISTING STONE SURFACE TO BE REMOVED, STOCKPILED AND REDISTRIBUTED AFTER NEW GRADES ARE COMPLETED.



**OFFSITE DEMOLITION PLAN**  
 SCALE: 1" = 30'





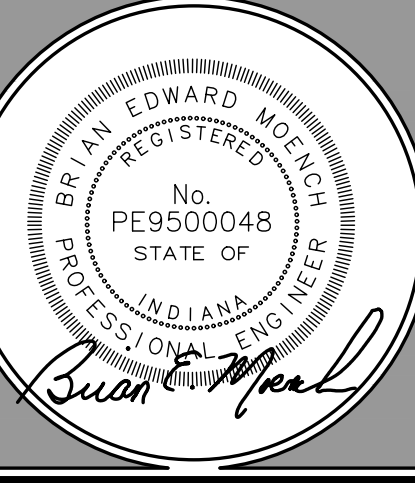
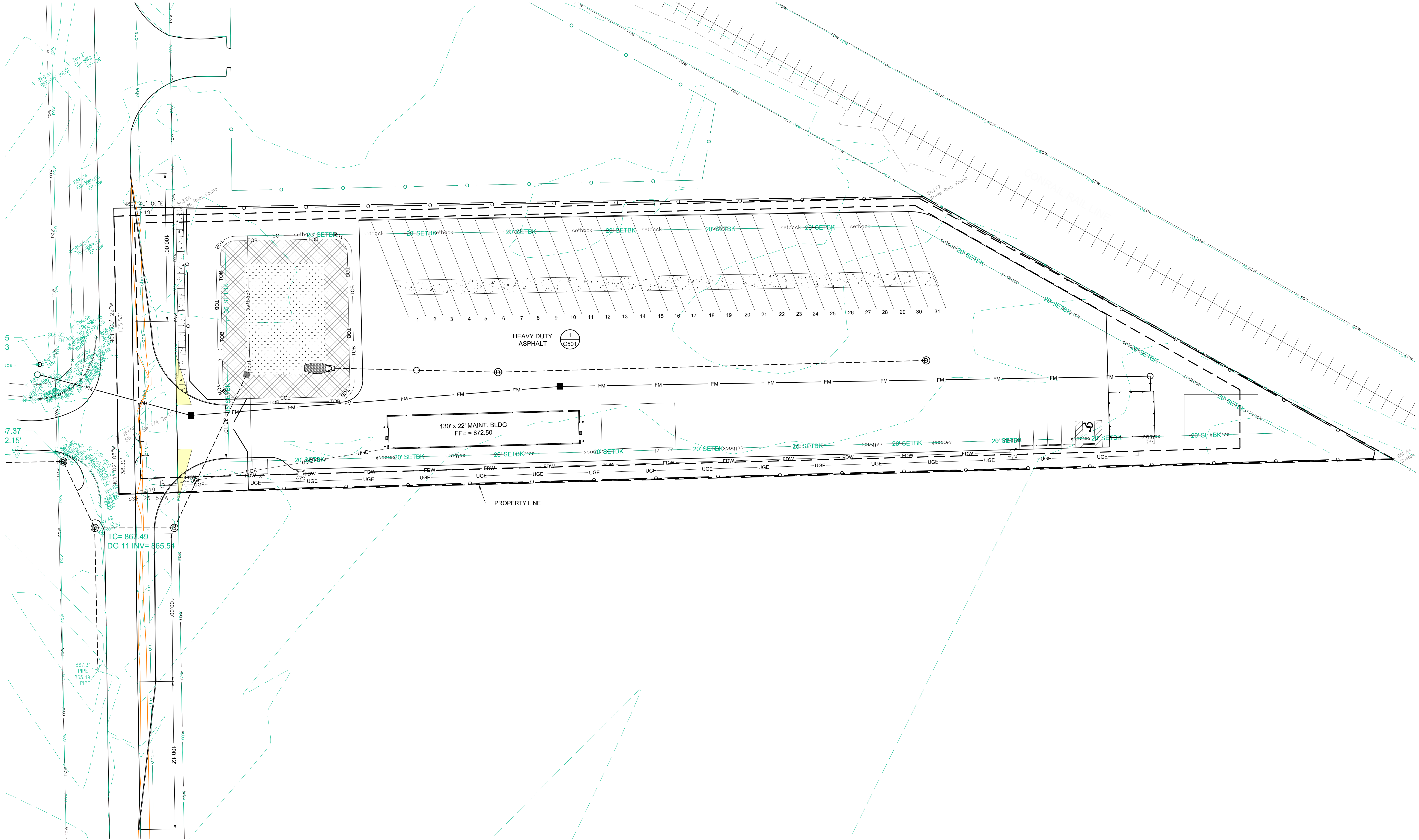
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**LIONS TRANS INC. (BROWNSBURG)**

4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**OVERALL SITE PLAN**



**REVISIONS:**

0	SUBMITTED FOR REVIEW	11/5/21
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**C101**



**LEGAL DESCRIPTION**

LEGAL DESCRIPTION:  
Per Instrument No. 202121241 SUR filed in the Office of the Recorder in Hendricks County, Indiana, and described as follows:

Addresses and Parcel Numbers:  
4005 N.C.R. 1000 E., Brownsburg, IN 46112  
#32-08-17-365-002.000-016

The following represents a modernized legal description of a tract of land, as described in Instrument #1998-04591 in the Office of the Recorder of Hendricks County, Indiana and being located in the Southwest Quarter of Section 17 and the Northwest Quarter of Section 20 both in Township 16 North, Range 2 East of the Second Principal Meridian, Hendricks County, Indiana. Said tract being more particularly bound and described as follows, to-wit:

East line of the Southwest quarter of Section 17 as being North 01 degrees 22 minutes 53 seconds West, dead, measured North 01 degrees 00 minutes 22 seconds West and all other bearings being relative thereto.

Beginning at a Hendricks County Aluminum monument found marking the Southwest corner of the Southwest quarter Section 17, Township 16 North, Range 2 East of the Second Principal Meridian, Hendricks County, Indiana; thence running North on and along the West line of the Southwest quarter of Section 17 bearing North 01° 22' 53" West 155.58 feet, dead, and measured North 01° 00' 22" West 155.53 feet to a point on said West line, marking the Northeast corner of the National Hot Rod Association tract as referenced in the caption; thence running East on and along the North line of the National Hot Rod Association bearing North 88° 42' 57" East 546.58 feet, dead, and measured North 89° 10' 00" East a distance of 40.19 feet to a found 5/8" rebar with Kruse Consulting cap affixed and the Point of Beginning of this description; thence continuing North 89° 10' 00" East a distance of 508.15 feet to a found 5/8" rebar with Kruse Consulting cap affixed marking the intersection with the Southwesterly Right-of-Way of the CSX Railroad; thence running Southeastly on and along the CSX Railroad Right-of-Way and traveling into the Northwest quarter of Section 20 bearing South 61° 12' 10" East 366.62 feet, dead, and measured South 60° 46' 15" East a distance of 365.01 feet to a found 5/8" rebar with Gaston cap marking the Northeast corner of Lot 1 in Villa Farms Subdivision, as per plat thereof recorded in Plat Book 3, page 134 in the Office of the Recorder of Hendricks County, Indiana; thence running West on and along the North line of said Lot 1 in Villa Farms Subdivision bearing South 88° 25' 57" West 863.49 feet (plat for Villa Farms shows this line to be 860.54 feet, calculated to be 823.52 feet to a point marking the intersection with the East right-of-way of N. CR. 1000 E.; thence South 01° 02' 08" East, on and along said right-of-way, traveling into the Northwest quarter of Section 20; thence South 88° 25' 57" West 40.19 feet to a point on the West line of the Northwest quarter of Section 20; thence North 01° 02' 08" West on and along aforementioned West line, 38.39 feet, thence North 01° 02' 22" East 155.02 feet to the Point of Beginning. Containing 2.895 acres, more or less, subject to all easements and rights-of-way of record.

Dedicated Right-of-Way:  
Beginning at a Hendricks County Aluminum monument found marking the Southwest corner of the Southwest quarter Section 17, Township 16 North, Range 2 East of the Second Principal Meridian, Hendricks County, Indiana, and the Point of Beginning of this description; thence running North on and along the West line of the Southwest quarter of Section 17 bearing North 01° 22' 53" West 155.58 feet, dead, and measured North 01° 00' 22" West 155.53 feet to a point on said West line, marking the Northeast corner of the National Hot Rod Association tract as referenced in the caption; thence running East on and along the North line of the National Hot Rod Association bearing North 88° 42' 57" East, dead, and measured North 89° 10' 00" East a distance of 40.19 feet to a found 5/8" rebar with Kruse Consulting cap affixed, marking the intersection with the east right-of-way line of N. CR. 1000 E.; thence South 01° 02' 22" East 155.02 feet on and along said right-of-way; thence South 01° 02' 08" East, on and along said right-of-way, traveling into the Northwest quarter of Section 20; thence South 88° 25' 57" West 40.19 feet to a point on the West line of the Northwest quarter of Section 20; thence North 01° 02' 08" West on and along aforementioned West line, 38.39 feet to the Point of Beginning of this Dedicated Right-of-Way description. Containing 0.179 acres, more or less.

**LINETYPE LEGEND:**

(SF)	= SILT FENCE
x	= BARB WIRE FENCE
o	= CHAIN-LINK FENCE
H	= WOOD FENCE
W	= WATER LINE
STRM	= STORM SEWER LINE
SAN	= SANITARY SEWER LINE
GAS	= GAS LINE
UGE	= UNDERGROUND ELECTRIC LINE
OHE	= OVERHEAD ELECTRIC LINE
COMM	= COMMUNICATION LINE
T	= TELEPHONE LINE
UTELE	= UNDERGROUND TELEPHONE LINE
FO	= FIBER OPTIC LINE
W	= FIRE DEPARTMENT WATER SUPPLY
35' ESMT	= 35' EASEMENT LINE
30' ESMT	= 30' EASEMENT LINE
25' ESMT	= 25' EASEMENT LINE
20' ESMT	= 20' EASEMENT LINE
15' ESMT	= 15' EASEMENT LINE
10' ESMT	= 10' EASEMENT LINE
5' ESMT	= 5' EASEMENT LINE
ESMT	= EASEMENT LINE
000	= SWALE LINE
000	= EDGE OF WATER
35' SETBK	= 35' SETBACK LINE
30' SETBK	= 30' SETBACK LINE
25' SETBK	= 25' SETBACK LINE
20' SETBK	= 20' SETBACK LINE
15' SETBK	= 15' SETBACK LINE
10' SETBK	= 10' SETBACK LINE
5' SETBK	= 5' SETBACK LINE
SETBK	= SETBACK LINE
ROW	= RIGHT-OF-WAY LINE
UD	= SWALE UNDERDRAIN
CABLE	= CABLE TV LINE
FL>	= FLOW LINE

**SYMBOL LEGEND:**

◄	= STORM SEWER END SECTION
—	= SANITARY SEWER CLEANOUT
○	= CLEANOUT
⊕	= MANHOLE
⊕	= CATCH BASIN
⊕	= CATCH BASIN
⊕	= CURB INLET
⊕	= FIRE HYDRANT
⊕	= PRESSURE RELIEF VALVE
⊕	= WATER VALVE
⊕	= WATER WELL
⊕	= GAS VALVE
⊕	= UTILITY POLE
⊕	= UTILITY POLE
○	= PROPERTY CORNER
○	= IRON ROD FOUND
○	= REBAR FOUND
△	= SURVEY POINT (SECTION CORNER)
⊕	= BENCHMARK
⊕	= SOIL BORING
1741.25	= NEW GRADE ELEVATION
x 1741.25	= EXISTING GRADE ELEVATION
	= STRAW BALE DAM
⊕	= ROCK DAM
⊕	= SIGN
⊕	= STOP SIGN
⊕	= HANDICAP SIGN
⊕	= ENTER ONLY SIGN
⊕	= EXIT ONLY SIGN
⊕	= DO NOT ENTER SIGN
⊕	= EVERGREEN TREE
⊕	= DECIDUOUS TREE
⊕	= BUSH
⊕	= TEMPORARY CONSTRUCTION ENTRANCE
⊕	= GRASS PERMANENT SEEDING
⊕	= EROSION CONTROL BLANKET ON ALL SLOPES 3:1 OR GREATER

**SITE NOTES:**

**HANDICAP RAMP CONSTRUCTION NOTES:**

- ALL HANDICAP RAMP SHALL MEET THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT. THE MOST RECENT INDOT STANDARD SPECIFICATIONS AND THE GOVERNING JURISDICTIONS MOST RECENT STANDARDS. CURB SWIPES REQUIRED FOR HANDICAP RAMPS SHALL BE PROVIDED AT TIME OF INITIAL CONSTRUCTION.
- MINIMUM WIDTH OF CURB RAMP SHALL BE 4 FEET NOT INCLUDING FLARES. MAXIMUM SLOPE OF RAMPS SHALL BE 1:21
- HANDICAP RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
- TYPE 'E' RAMPS SHALL BE PROVIDED AT THE CENTERLINE OF RADIUS AT ALL CORNERS OF EVERY STREET INTERSECTION WHERE THERE IS AN EXISTING OR PROPOSED SIDEWALK AND CURB. IN CASE OF "T" INTERSECTION, A TYPE 'C' RAMP SHALL BE PROVIDED ADJACENT TO EACH CORNER RAMP. TYPE 'C' RAMPS ALSO SHALL BE PROVIDED AT WALK LOCATIONS AT MID-BLOCK IN VICINITY OF HOSPITALS, MEDICAL CENTERS OR ATHLETIC STADIUMS. THE USE OF DETAILS CONTRARY TO THOSE SHOWN HEREIN SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF THE GOVERNING JURISDICTION.
- SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- RAMPS SHALL BE PROVIDED WHERE THE DRIVEWAY CURB EXTENDS ACROSS THE SIDEWALK.
- CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON ALL RAMPS WITH NO BREAKS IN GRADE.
- DRAINAGE STRUCTURES SHALL NOT BE PLACED IN LINE WITH THE RAMPS EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION. LOCATION OF THE RAMPS SHALL TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURES.
- THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
- EXPANSION JOINTS FOR THE RAMP SHALL BE A MAXIMUM 1/2" WIDE. THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
- CROSSWALK AND STOP LINE MARKING, IF USED, SHALL BE LOCATED TO STOP TRAFFIC SHORT OF ALL RAMP CROSSINGS.
- SLOPE OF RAMP MAY BE WARPED WHEN FILED CONDITIONS WARRANT AND WHEN APPROVED BY THE GOVERNING JURISDICTION.

**LOT COVERAGE**

	ACRES	PERCENT
ASPHALT	1.845	60%
BUILDINGS	0.086	2.8%
SIDEWALK	0.016	0.5%
PERVIOUS	1.123	36.6%
TOTAL LOT	3.07	100%

**SITE NOTES:**

**GENERAL NOTES:**

- REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTIONS BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
- ALL RADII SHALL BE 5 FOOT UNLESS NOTED OTHERWISE ON PLANS.
- CONTRACTOR TO VERIFY EXACT LOCATION AND INVERT OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- STORM SEWER PIPE OF OTHER MATERIAL OR MATERIAL NOT MEETING THESE SPECIFICATIONS SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL SUBMIT INFORMATION TO THE APPROPRIATE JURISDICTIONAL CONTACT SHOWING CONFORMANCE WITH THESE SPECIFICATIONS UPON REQUEST.
- NOTICE SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE PROJECT SITE CONTAINING ALL DOCUMENTATION LISTED IN ITEM CSGP SECTION 3.3(a)(13)(A).

**PAVEMENT CONSTRUCTION:**

- THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION, SHALL APPLY TO WORKMANSHIP AND MATERIALS IN CONSTRUCTION OF SUBGRADE, PAVEMENT, CURBS AND WALKS.
- PREPARE THE SUBGRADE IN ACCORDANCE WITH INDOT SECTION 207. NO TRAFFIC WILL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING.
- BITUMINOUS PAVEMENT IN ACCORDANCE WITH INDOT SECTION 403.
- FINISHING FINE GRADED SHOULDERS, DITCHES AND SLOPES IN ACCORDANCE WITH INDOT SECTION 208.

**CONCRETE PAVEMENT AND WALKS:**

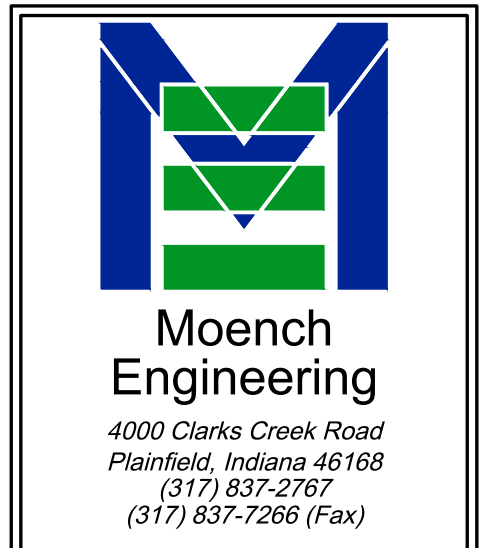
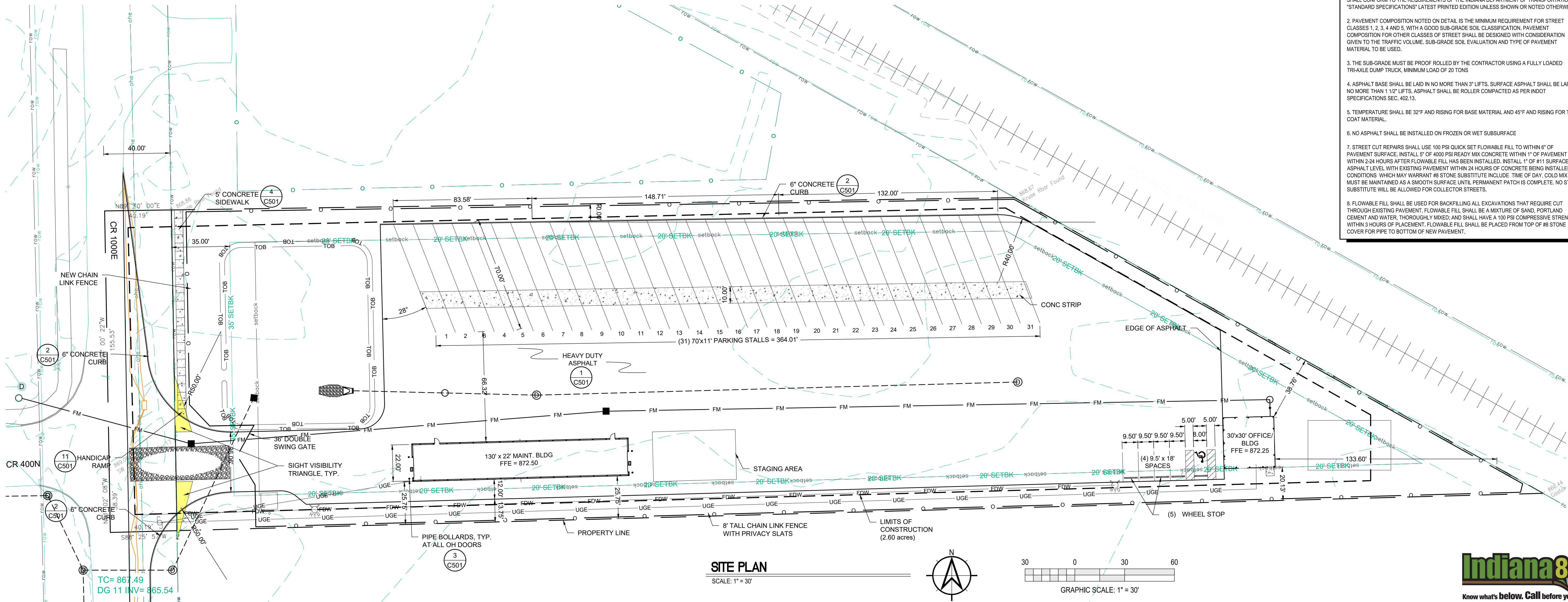
- SEE DETAIL FOR TYPE AND DETAILS.
- CONCRETE SHALL BE READY MIXED PORTLAND CEMENT AND WATER CONFORMING TO ASTM C-150. AGGREGATES SHALL CONFORM TO ASTM C-33. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 4000 P.S.I. WHERE REQUIRED, REINFORCEMENT SHALL BE WELDED STEEL WIRE FABRIC CONFORMING TO ASTM A-185.
- ALL EXTERIOR CONCRETE SHALL CONTAIN 8% ± 1% AIR ENTRAINMENT.

**APPLICATION:**

- PLACE CONCRETE ONLY ON A MOIST, COMPACT SUBGRADE OR BASE FREE FROM LOOSE MATERIAL. PLACE NO CONCRETE ON MUDDY OR FROZEN SUBGRADE IN ACCORDANCE WITH INDOT SECTION 604 AND 605.
- CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS LITTLE REHANDLING AS PRACTICAL, WHEN CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES OR LESS, PARAGRAPH 702.10 OF THE INDOT SPECIFICATIONS SHALL APPLY.
- EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN INDOT SECTION 501.17.

**PARKING LOT STRIPING:**

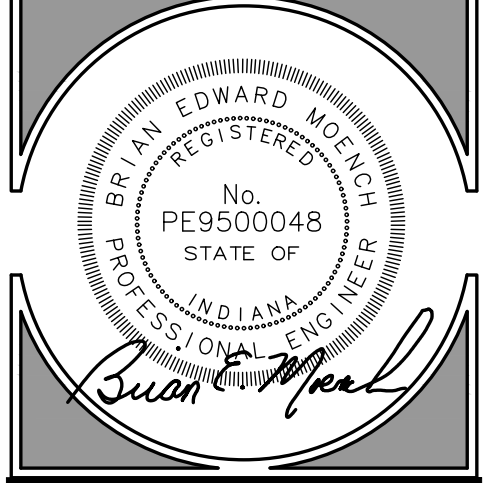
- PAINT MATERIAL SHALL COMPLY WITH FEDERAL SPECIFICATION TT-P-115A FOR TRAFFIC PAINT WITHOUT GLASS SPHERES, (COLOR BY OWNER SELECTION).
- SUBCONTRACTOR TO PERFORM ALL FIELD LAYOUT WORK NECESSARY TO ACHIEVE STRAIGHT AND TRUE LINES. ASPHALT MUST BE CLEANED WITH POWER BROOM AND HAND BROOM TO REMOVE LOOSE MATERIAL BEFORE STRIPING. THE SUBCONTRACTOR IS TO PROVIDE BARRIERS TO PREVENT MARRING OF LINES BY VEHICLES UNTIL PAINT HAS DRIED. STRIPING PAINT SHALL BE APPLIED AT THE MINIMUM RATE OF ONE GALLON PER 100 SQUARE FEET OF PAINT (BASED ON 35% SOLIDS) AT A WIDTH OF 3 FEET.
- MATERIALS AND CONSTRUCTION FOR STREETS, WALKS, CURBS AND STORM WATER SEWERS SHALL CONFORM TO THE REQUIREMENTS OF THE INDIANA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS" LATEST PRINTED EDITION UNLESS SHOWN OR NOTED OTHERWISE.
- PAVEMENT COMPOSITION NOTED ON DETAIL IS THE MINIMUM REQUIREMENT FOR STREET CLASSES 1, 2, 3, 4 AND 5. WITH A GOOD SUB-GRADE SOIL CLASSIFICATION, PAVEMENT COMPOSITION FOR OTHER CLASSES OF STREET SHALL BE DESIGNED WITH CONSIDERATION GIVEN TO THE TRAFFIC VOLUME, SUB-GRADE SOIL EVALUATION AND TYPE OF PAVEMENT MATERIAL TO BE USED.
- THE SUB-GRADE MUST BE PROOF ROLLED BY THE CONTRACTOR USING A FULLY LOADED TRI-AXLE DUMP TRUCK, MINIMUM LOAD OF 20 TONS
- ASPHALT BASE SHALL BE LAID IN NO MORE THAN 3" LIFTS. SURFACE ASPHALT SHALL BE LAID IN NO MORE THAN 1 1/2" LIFTS. ASPHALT SHALL BE ROLLER COMPACTED AS PER INDOT SPECIFICATIONS SEC. 402.13.
- TEMPERATURE SHALL BE 32°F AND RISING FOR BASE MATERIAL AND 45°F AND RISING FOR TOP COAT MATERIAL.
- NO ASPHALT SHALL BE INSTALLED ON FROZEN OR WET SUBSURFACE
- STREET CUT REPAIRS SHALL USE 100 PSI QUICK SET FLOWABLE FILL TO WITHIN 6" OF PAVEMENT SURFACE. INSTALL 5" OF 4000 PSI READY MIX CONCRETE WITHIN 1" OF #11 SURFACE ASPHALT LEVEL, WITH EXISTING PAVEMENT WITHIN 24 HOURS OF CONCRETE BEING INSTALLED. CONDITIONS WHICH MAY WARRANT AS STONE SUBSTITUTE INCLUDE: TIME OF DAY, COLD MIX MUST BE MAINTAINED AS A SMOOTH SURFACE UNTIL PERMANENT PATCH IS COMPLETE. NO STONE SUBSTITUTE WILL BE ALLOWED FOR COLLECTOR STREETS.
- FLOWABLE FILL SHALL BE USED FOR BACKFILLING ALL EXCAVATIONS THAT REQUIRE CUT THROUGH EXISTING PAVEMENT. FLOWABLE FILL SHALL BE A MIXTURE OF SAND, PORTLAND CEMENT AND WATER, THOROUGHLY MIXED, AND SHALL HAVE A 100 PSI COMPRESSIVE STRENGTH WITHIN 3 HOURS OF PLACEMENT. FLOWABLE FILL SHALL BE PLACED FROM TOP OF #8 STONE COVER FOR PIPE TO BOTTOM OF NEW PAVEMENT.



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**LIONS TRANS INC. (BROWNSBURG)**  
4005 N CR 1000 E  
BROWNSBURG, IN 46122

**SITE PLAN**



**REVISIONS:**

0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	REVISED Storm Outlet	9/26/25

DRAWN BY: JBF  
CHECKED BY: BEM  
PROJECT NUMBER: 21346  
DATE: 1/13/22  
SHEET NUMBER: C201



National Flood Hazard Layer FIRMette



**Legend**

SEE FIR REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

- Without Base Flood Elevation (BFE) Zone A & B
- With BFE or Depth Zone AE, A1, A1.1, A1.2, A1.3, A1.4, A1.5, A1.6, A1.7
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee Zone D
- Area with Flood Risk due to Levee Zone D

**OTHER AREAS**

- Area of Minimal Flood Hazard Zone X
- Effective LOMs
- Area of Undetermined Flood Hazard Zone D

**GENERAL STRUCTURES**

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**CROSS SECTIONS WITH 1% ANNUAL CHANCE**

- Water Surface Elevation
- Coastal Tract
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Tract Baseline
- Profile Baseline
- Hydrographic Feature

**OTHER FEATURES**

- Digital Data Available
- No Digital Data Available
- Unmapped

**MAP PANELS**

- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/20/2022 at 4:21 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmemoized areas cannot be used for regulatory purposes.

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YbvaA	Brookston silty clay loam-Urban land complex, 0 to 2 percent slopes	1.8	53.2%
Yc1A	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	1.5	46.8%
<b>Totals for Area of Interest</b>		<b>3.3</b>	<b>100.0%</b>

**FLOOD ZONE DESIGNATION:**

THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALES FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR:

HENDRICKS COUNTY, INDIANA  
 COMMUNITY NAME: TOWN OF BROWNSBURG  
 COMMUNITY NUMBER: 180087  
 PANEL NUMBER: C0179E  
 DATED: JUNE 15, 2022

**STAGE STORAGE TABLE**

ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	CONIC INC. VOL. (cu. ft.)	CONIC TOTAL VOL. (cu. ft.)
862.660	4,044.91	N/A	N/A	0.00	N/A	0.00
863,000	4,312.07	0.340	1420.69	1420.69	1420.44	1420.44
864,000	5,146.08	1,000	4729.07	6149.76	4722.93	6143.37
865,000	6,051.22	1,000	5598.65	11748.41	5592.54	11735.92
866,000	7,016.36	1,000	6533.79	18282.20	6527.84	18263.76
867,000	8,038.03	1,000	7527.19	25809.39	7521.41	25785.17
868,000	9,116.26	1,000	8571.15	34386.54	8571.50	34356.66

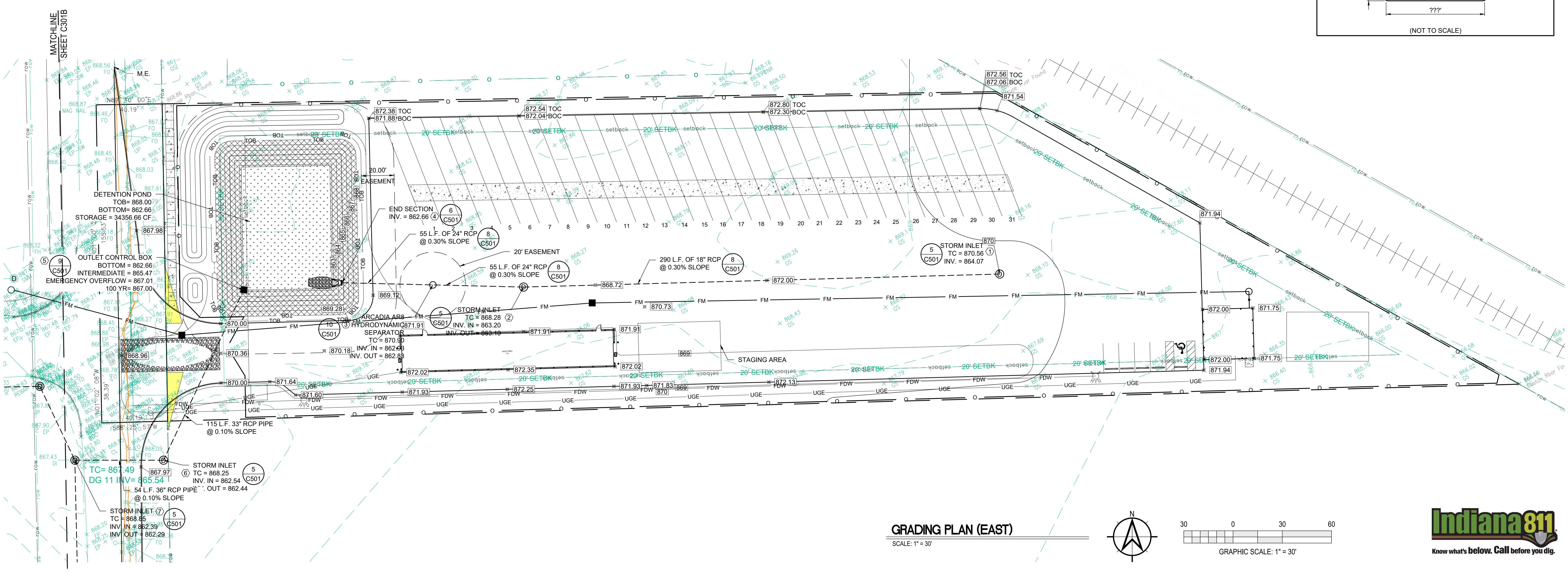
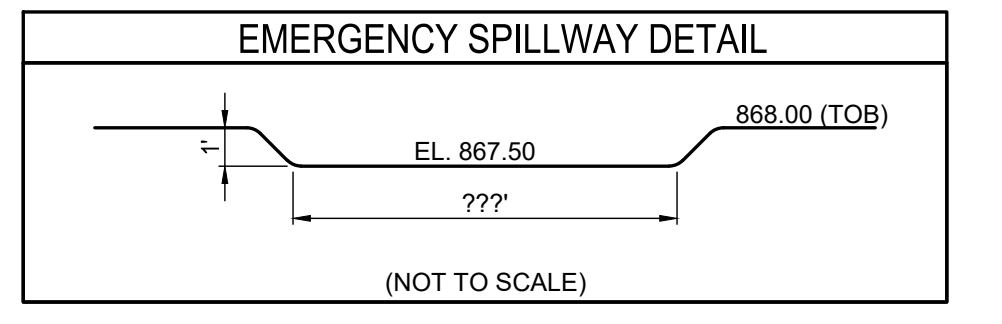
**GRADING NOTES:**

**GENERAL GRADE NOTES:**

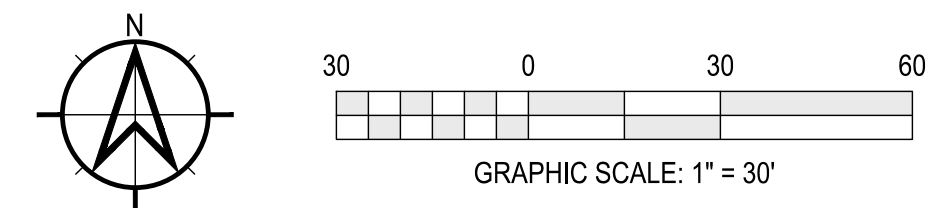
- REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTION BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
- FILL MATERIAL SHALL CONSIST OF EARTH OBTAINED FROM CUT AREAS, BORROW PITS OR OTHER APPROVED SOURCES. EARTH SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND LARGE ROCKS. THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES FOLLOWING COMPACTION. PROPER MOISTURE CONTENT OF FILL MATERIAL WILL BE SUCH TO ACHIEVE SPECIFIED COMPACTION DENSITY. ALL FILL BENEATH PAVED AREAS, FLOOR SLABS AND FUTURE BUILDINGS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-1557. FIELD COMPACTION TEST SHALL BE RUN ON EACH LIFT. IN FILL SECTIONS, AND THE REQUIRED COMPACTION ON EACH LIFT SHALL BE IN ACCORDANCE WITH INDOT SECTION 211.
- MAXIMUM LAWN SLOPE IS 3:1.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA EXISTING UTILITY STRUCTURES ARE SHOWN HERE IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION IN COOPERATION WITH APPLICABLE UTILITY COMPANY IS THE EXPRESSED RESPONSIBILITY OF THE CONTRACTOR.
- ALL SPOT ELEVATIONS ARE TO FINISHED GRADE.
- ALL EXISTING MANHOLE CASTINGS TO BE ADJUSTED TO FINISH GRADE.
- COMPACT "B" BORROW BACK FILL REQ'D. OVER ALL UTILITIES IN PAVED AREAS.
- DISTURBED AREAS TO BE GRADED TO FINAL GRADE AND RECEIVE A MIN OF 4" TOPSOIL.
- STABILIZATION MUST BE INITIATED BY END OF THE 7TH DAY THE AREA IS LEFT IDLE AND STABILIZATION SHALL BE COMPLETED WITHIN 14 DAYS AFTER INITIATION.
- FINAL STABILIZATION IS ACHIEVED WHEN ALL LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH DENSITY OF 70% ON ALL UNPAVED SURFACES.
- WATER SHOULD BE PUMPED THROUGH BMP AND INTO THE DETENTION POND.

**REINFORCED CONCRETE PIPE:**

- REINFORCED CONCRETE PIPE SHALL BE CLASS III, IV OR V AS SPECIFIED IN ASTM C-76.
- REINFORCED ELLIPTICAL CONCRETE PIPE SHALL BE CLASS HE-III OR HE-IV AS SPECIFIED IN ASTM C-507.
- LIFT HOLES ARE NOT ALLOWED FOR PIPE LESS THAN 24 INCHES IN DIAMETER. A MAXIMUM OF TWO LIFT HOLES ARE ALLOWED FOR PIPE 24 INCH IN DIAMETER OR LARGER. LIFT HOLES SHALL BE REPAIRED ACCORDING TO MOST RECENT INDOT STANDARD SPECIFICATIONS.
- FITTINGS AND SPECIALTIES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE TYPE OF PIPE BEING USED.
- EACH PIPE SECTION SHALL BE MARKED WITH DATE OF MANUFACTURE, SIZE AND CLASS OF PIPE, SPECIFICATION DESIGNATION, MANUFACTURER AND PLANT IDENTIFICATION.
- PIPE SHALL BE FURNISHED WITH A BELL OR GROOVE ON ONE END OF A UNIT OF PIPE AND A SPIGOT OR TONGUE ON THE ADJACENT END OF THE ADJOINING PIPE. ALL JOINTS SHALL HAVE A GROOVE ON THE SPIGOT FOR PLACEMENT OF A RUBBER "O-RING" OR PROFILE GASKET IN ACCORDANCE WITH ASTM C-443. THE GASKET SHALL BE A CONTINUOUS RING WHICH FITS SNUGLY INTO THE ANNULAR SPACE BETWEEN THE OVERLAPPING SURFACES OF THE ASSEMBLED PIPE JOINT.



**GRADING PLAN (EAST)**  
 SCALE: 1" = 30'



**Moench Engineering**  
 4000 Clarks Creek Road  
 Plainfield, Indiana 46168  
 (317) 837-2767  
 (317) 837-7266 (Fax)

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**LIONS TRANS INC. (BROWNSBURG)**  
 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**GRADING PLAN (EAST)**

**REVISIONS:**

NO	DESCRIPTION	DATE
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

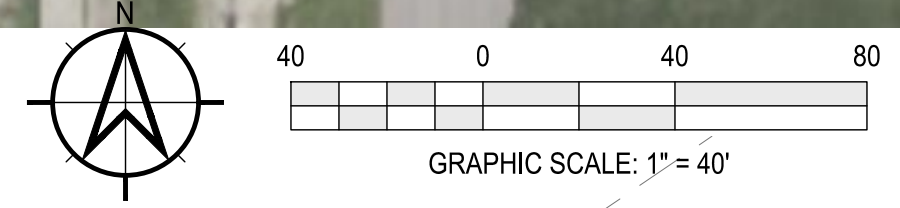
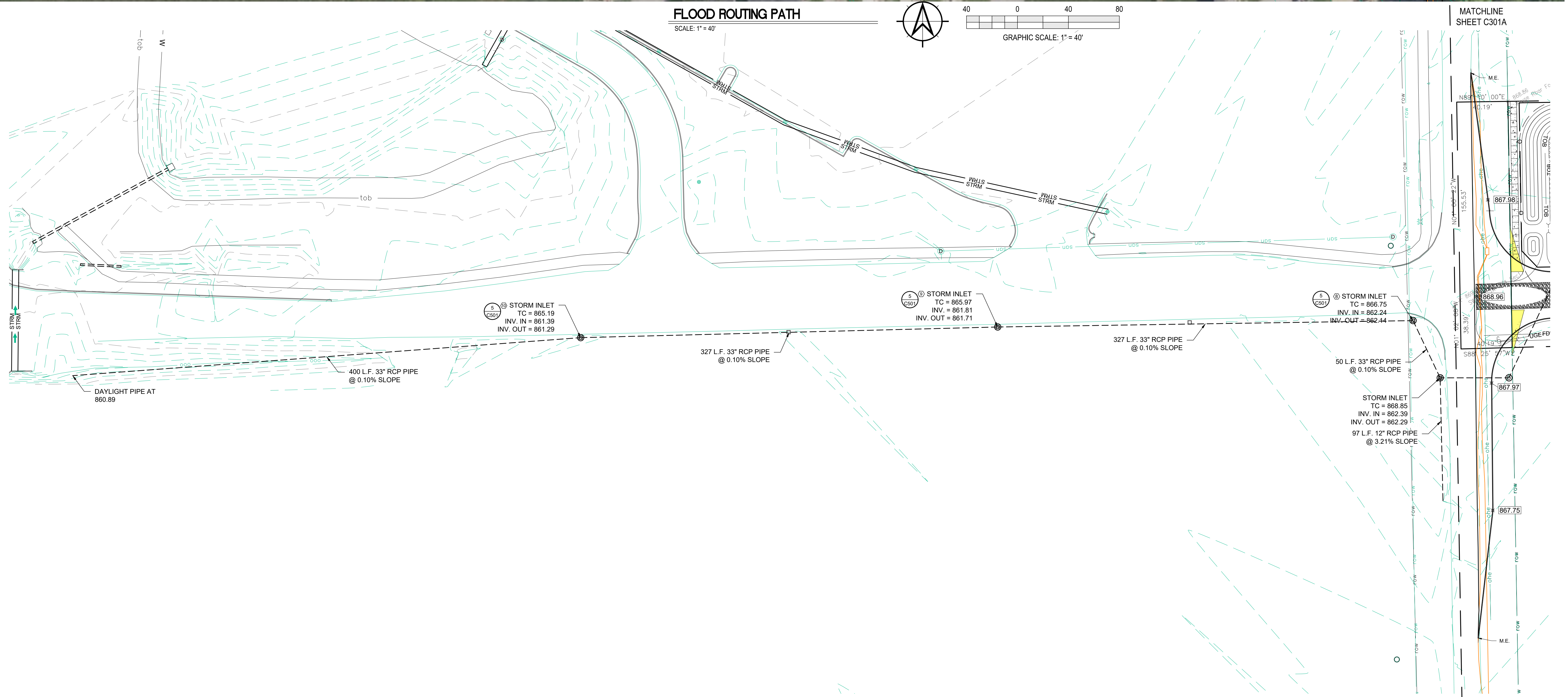
DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 11/3/22  
 SHEET NUMBER:  
**C301A**



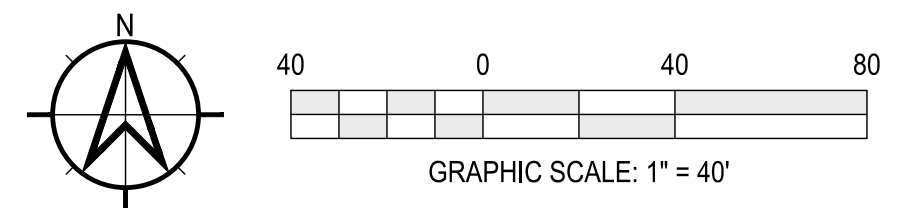
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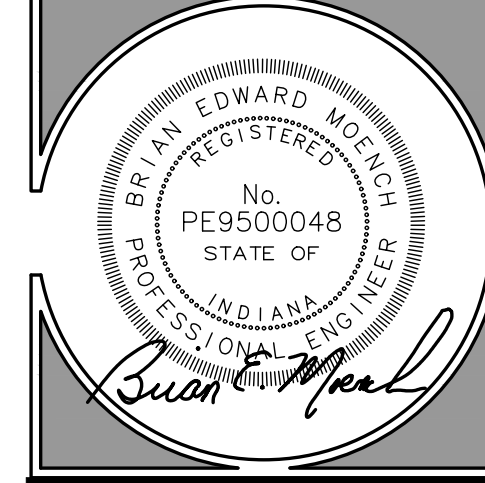
**FLOOD ROUTING PATH**  
 SCALE: 1" = 40'

**GRADING PLAN (WEST)**  
 SCALE: 1" = 40'



**LIONS TRANS INC. (BROWNSBURG)**  
 4005 N CR 1000 E  
 BROWNSBURG, IN 46122  
 GRADING PLAN (WEST)



**REVISIONS:**

0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	1/12/22
3	REVISED per TOWN COMMENTS	9/09/24
4	REVISED per TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22  
 SHEET NUMBER:

**C301B**

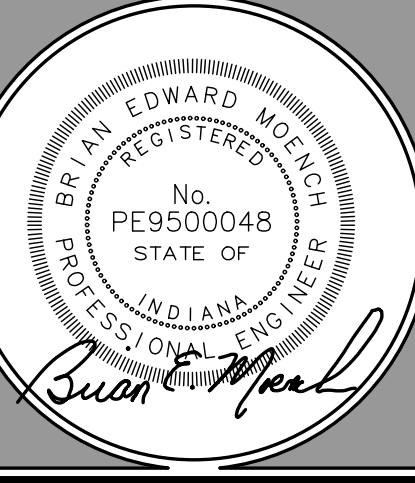


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**LIONS TRANS INC. (BROWNSBURG)**  
 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**PIPE PROFILE PLAN (WEST)**

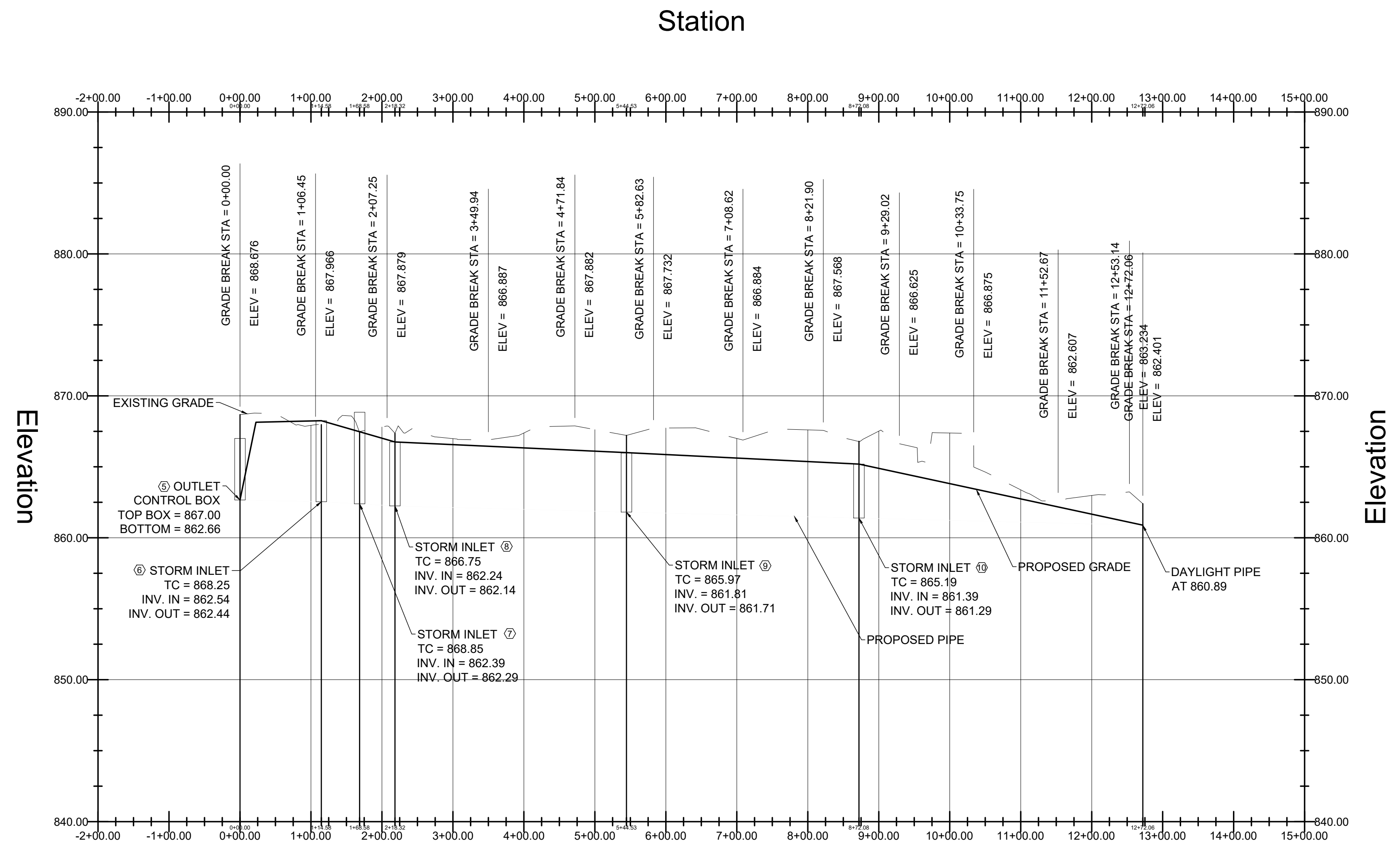


**REVISIONS:**

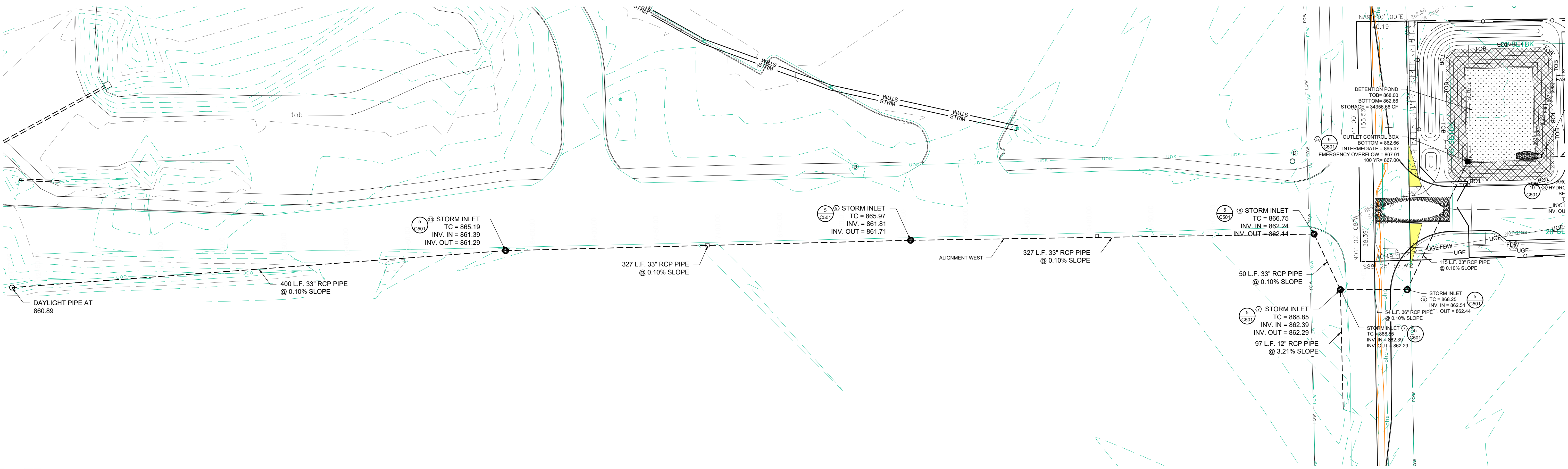
NO.	DESCRIPTION	DATE
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED per TOWN COMMENTS	9/09/24
4	REVISED per TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22

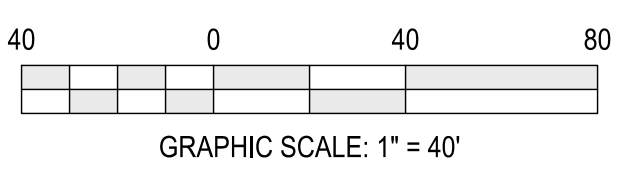
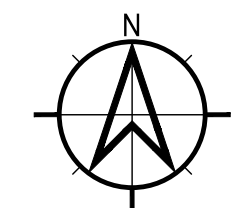
SHEET NUMBER:  
**C301C**



**PIPE PROFILE VIEW ALIGNMENT WEST**  
 NOT TO SCALE



**ALIGNMENT WEST**  
 SCALE: 1" = 40'



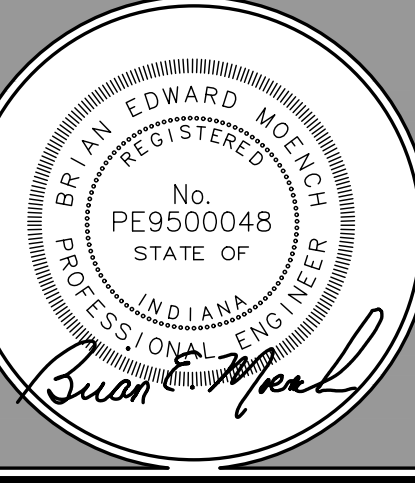


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**LIONS TRANS INC. (BROWNSBURG)**  
 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**PIPE PROFILE PLAN (EAST)**

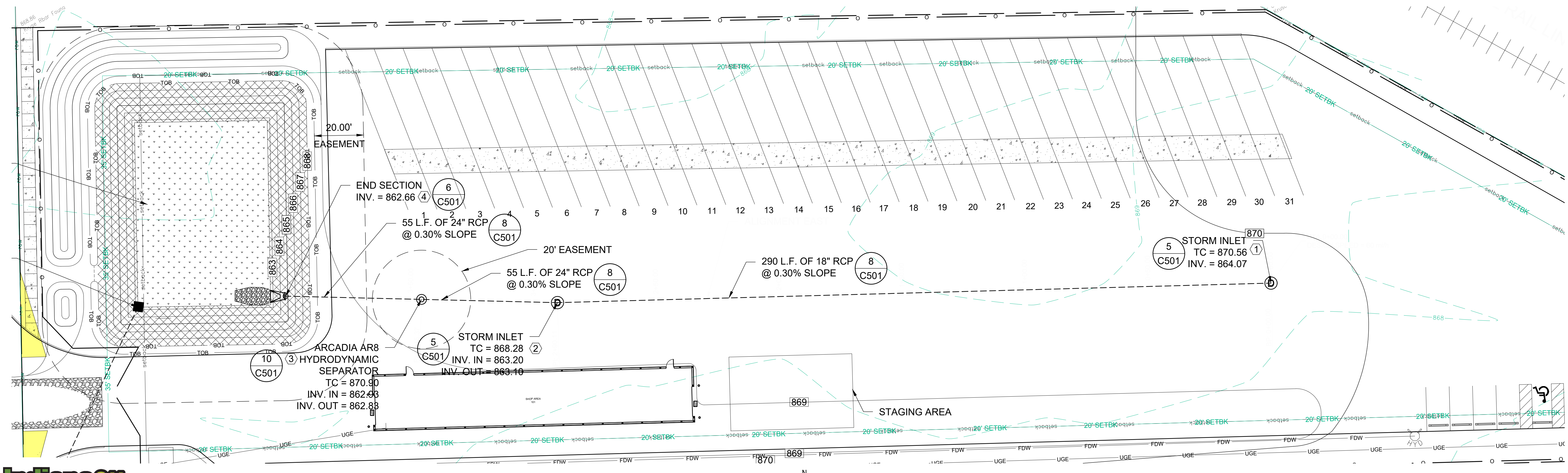
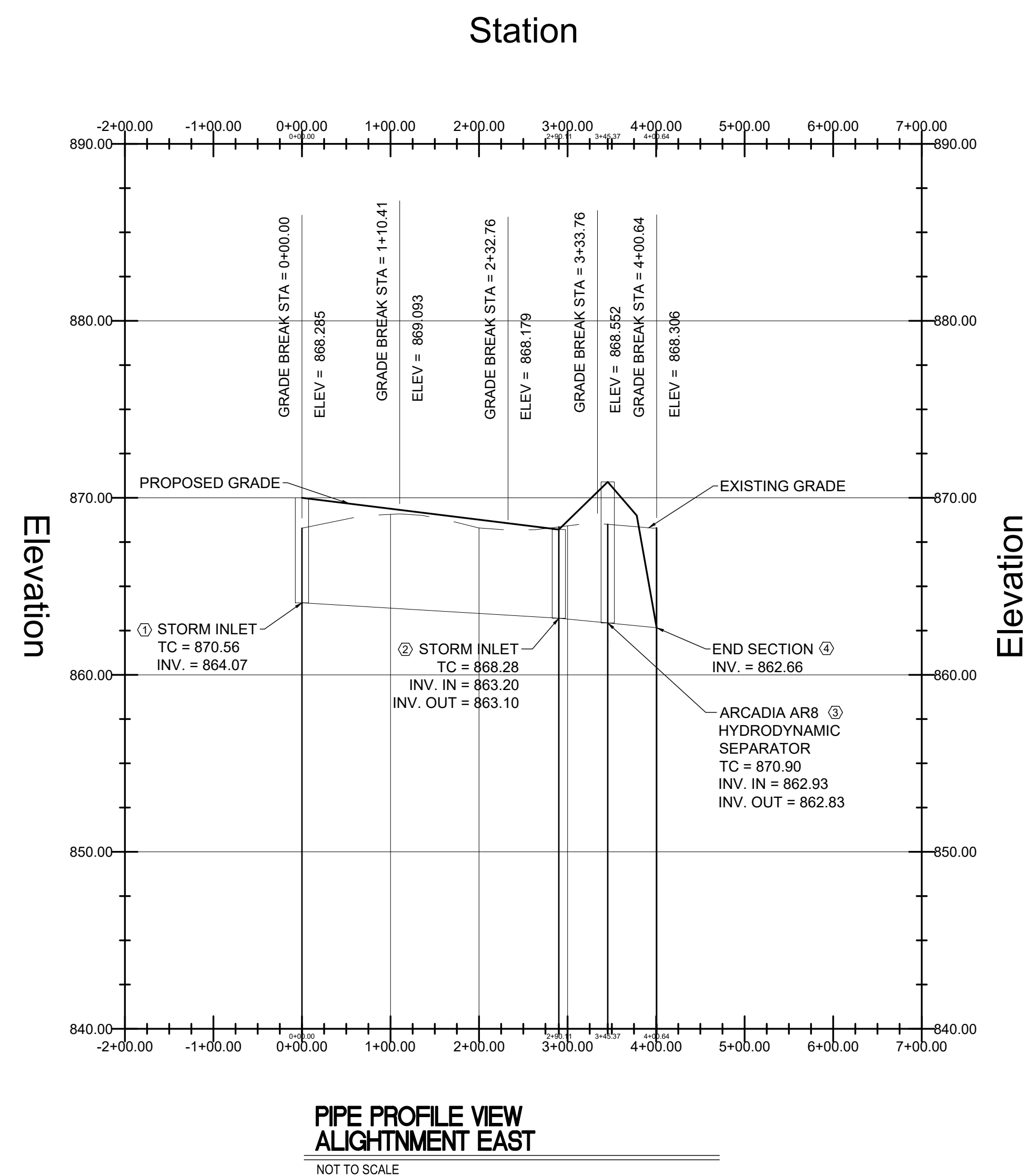


**REVISIONS:**

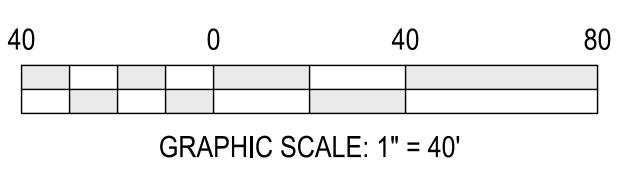
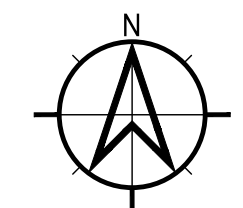
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5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22  
 SHEET NUMBER:

**C301D**



**ALIGNMENT EAST**  
 SCALE: 1" = 20'





SECTION	TITLE	SHEET
A1	Index of the location of required plan elements in the construction plan	C000
A2	A vicinity map depicting the project site location in relationship to recognizable local landmarks, towns, and major roads	C000
A3	Narrative of the nature and purpose of the project	C303
A4	Latitude and longitude to the nearest fifteen (15) seconds	C000
A5	Legal description of the project site	C201
A6	11x17 inch plot showing building lot numbers/boundaries and road layout/names	C303
A7	Boundaries of the one hundred (100) year flood plains, floodway fringes, and floodways	C301
A8	Land use of all adjacent properties	C303
A9	Identification of a U.S. EPA approved or established TMDL	C303
A10	Name(s) of the receiving water(s)	C303
A11	Identification of discharges to a water on the current 303(d) list of impaired waters and the pollutant(s) for which it is impaired	C303
A12	Soils map of the predominate soil types	C301
A13	Identification and location of all known wetlands, lakes, and water courses on or adjacent to the project site (construction plan, existing site layout)	C303
A14	Identification of any other state or federal water quality permits or authorizations that are required for construction activities	C303
A15	Identification and delineation of existing cover, including natural buffers	C301
A16	Existing site topography at an interval appropriate to indicate drainage patterns	C301
A17	Location(s) where run-off enters the project site	C301
A18	Location(s) where run-off discharges from the project site prior to land disturbance	C301
A19	Location of all existing structures on the project site	N/A
A20	Existing permanent retention or detention facilities, including manmade wetlands, wetlands, designed for the purpose of stormwater management	N/A
A21	Locations where storm water may be directly discharged into ground water, such as abandoned wells, sinkholes, or karst features	C303
A22	Size of the project area expressed in acres	C000
A23	Total expected land disturbance expressed in acres	C000
A24	Proposed final topography	C301
A25	Locations and approximate boundaries of all disturbed areas	C201
A26	Locations, size, and dimensions of all storm water drainage system such as culverts, storm water sewer, and conveyance channels	C301
A27	Locations of specific points where storm water and non-storm water discharges will leave the project site	C301
A28	Location of all proposed site improvements, including roads, utilities, lot delineation and identification, proposed structures, and common areas	C201
A29	Location of all on-site and off-site soil stockpiles and borrow areas	C302
A30	Construction support activities that are expected to be part of the project	N/A
A31	Location of any in-stream activities that are planned for the project including, but not limited to, stream crossings and pump arounds	N/A
B1	Description of the potential pollutant generating sources and pollutants, including all potential non-storm water discharges	C303
B2	Stable construction entrance locations and specifications	C302
B3	Specifications for temporary and permanent stabilization	C302
B4	Sediment control measures for concentrated flow areas	C301
B5	Sediment control measures for sheet flow areas	C302
B6	Run off control measures	C302
B7	Storm water outlet protection location and specifications	C302/501
B8	Grade stabilization structure locations and specifications	N/A
B9	De-watering applications and management methods	C303
B10	Measures utilized for work within water bodies	N/A
B11	Maintenance guidelines for each proposed storm water quality measure	C303
B12	Planned construction sequence that describes the implementation of storm water quality measures in relation to land disturbance	C303
B13	Provisions for erosion and sediment control on individual residential building lots regulated under the proposed project	N/A
B14	Material handling and spill prevention and spill response plan meeting the requirements in 327 IAC 2-6.1	C303
B15	Material handling and storage procedures associated with construction activity	C303
C1	Description of pollutants and their sources associated with the proposed land use	C303
C2	Description of proposed post-construction storm water measures	C303
C3	Plan details for each storm water measure	C301/501
C4	Sequence describing storm water measure implementation	C303
C5	Maintenance guidelines for proposed post-construction storm water measures	C303
C6	Entity that will be responsible for operation and maintenance of the post-construction storm water measures	C302

NOTES:  
 \*NA\* - NON APPLICABLE

SECTION	TITLE	SHEET
A1	Index of the location of required plan elements in the construction plan:	C000
A2	A vicinity map depicting the project site location in relationship to recognizable local landmarks, towns, and major roads:	C000
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A8	Land use of all adjacent properties:	C303
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A11	Identification of discharges to a water on the current 303(d) list of impaired waters and the pollutant(s) for which it is impaired:	C303
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A18	Location(s) where run-off discharges from the project site prior to land disturbance:	C301
A19	Location of all existing structures on the project site:	N/A
A20	Existing permanent retention or detention facilities, including manmade wetlands, wetlands, designed for the purpose of stormwater management:	N/A
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A30	Construction support activities that are expected to be part of the project:	N/A
A31	Location of any on-stream activities that are planned for the project including, but not limited to, stream crossings and pump arounds:	N/A

SECTION	TITLE	SHEET
A15	Identification and delineation of existing cover, including natural buffers:	C301
A16	Existing site topography at interval appropriate to indicate drainage patterns:	C301
A17	Location(s) where run-off enters the project site:	C301
A18	Location(s) where run-off discharges from the project site prior to land disturbance:	C301
A19	Location(s) of all existing structures on the project site:	C301
A20	Existing permanent retention or detention facilities, including manmade wetlands, designed for the purpose of stormwater management:	C301
A21	Locations where storm water may be directly discharged into ground water, such as abandoned wells, sinkholes, or karst features:	C301
A22	Size of the project expressed in acres:	C301
A23	Total expected land disturbance expressed in acres:	C301
A24	Proposed final topography:	C301
A25	Locations and approximate boundaries of all disturbed areas:	C301
A26	Locations, size and dimensions of all stormwater drainage systems such as culverts, stormwater sewer, and conveyance channels:	C301
A27	Locations of specific points where stormwater and non-stormwater discharges will leave the project site:	C301
A28	Location of all proposed site improvements, including roads, utilities, lot delineation and identification, proposed structures, and common areas:	C301
A29	Location of all on-site and off-site soil stockpiles and borrow areas:	C301
A30	Construction support activities that are expected to be part of the project:	C301
A31	Location of any on-stream activities that are planned for the project including, but not limited to, stream crossings and pump arounds:	C301

SECTION	TITLE	SHEET
B1	Description of the potential pollutant generating sources and pollutants, including all potential non-storm water discharges:	C303
B2	Stable construction entrance locations and specifications:	C302
B3	Specifications for temporary and permanent stabilization:	C302
B4	Sediment control measures for concentrated flow areas:	C301
B5	Sediment control measures for sheet flow areas:	C302
B6	Run-off control measures:	C302
B7	Stormwater outlet protection location and specifications:	C302
B8	Grade stabilization structure locations and specifications:	C301
B9	De-watering applications and management methods:	C303
B10	Measures utilized for work within waterbodies:	N/A
B11	Maintenance guidelines for each proposed stormwater quality measure:	C303
B12	Planned construction sequence that describes the implementation of stormwater quality measures in relation to land disturbance:	C303
B13	Provisions for erosion and sediment control on individual residential building lots regulated under the proposed project:	N/A
B14	Material handling and spill prevention and spill response plan meeting the requirements in 327 IAC 2-6.1:	C303
B15	Material handling and storage procedures associated with construction activity:	C303

SECTION	TITLE	SHEET
C1	Description of pollutants and their sources associated with the proposed land use:	C303
C2	Description of proposed post-construction stormwater measures:	C303
C3	Plan details for each stormwater measure:	C301/501
C4	Sequence describing stormwater measure implementation:	C303
C5	Maintenance guidelines for proposed post-construction stormwater measures:	C303
C6	Entity that will be responsible for operation and maintenance of the post-construction stormwater measures:	C302

**Moench Engineering**  
 4000 Clarks Creek Road  
 Plainfield, Indiana 46168  
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 (317) 837-7266 (Fax)

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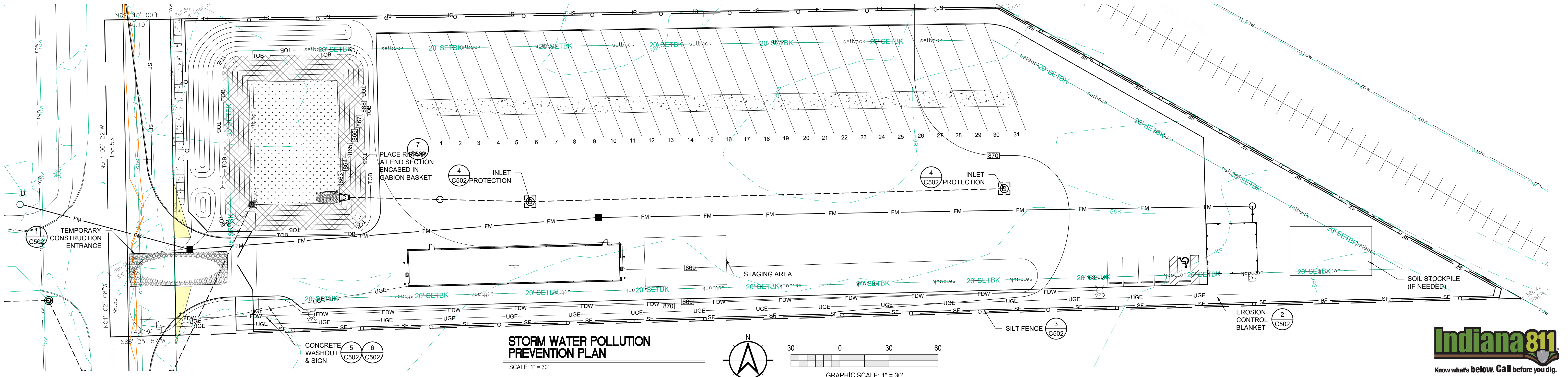
**STORM WATER POLLUTION PREVENTION PLAN**

REGISTERED PROFESSIONAL ENGINEER  
 No. PE9500048  
 STATE OF INDIANA  
*Susan Meacham*

REVISIONS:		
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	REVISED STORM OUTLET	9/26/25

DRAWN BY:	JBF
CHECKED BY:	BEM
PROJECT NUMBER:	21346
DATE:	1/13/22
SHEET NUMBER:	C303

**C303**



**Indiana811**  
 Know what's below. Call before you dig.

SYMBOL LEGEND:	
◄ = STORM SEWER END SECTION	741.25 = NEW GRADE ELEVATION
— = SANITARY SEWER CLEANOUT	x 741.25 = EXISTING GRADE ELEVATION
⊙ C.O. = CLEANOUT	▨ = STRAW BALE DAM
⊙ = MANHOLE	⊙ = ROCK DAM
⊙ = CATCH BASIN	⊙ = SIGN
⊙ = CATCH BASIN	STOP = STOP SIGN
⊙ = CURB INLET	⊙ = HANDICAP SIGN
⊙ = FIRE HYDRANT	ENTER ONLY = ENTER ONLY SIGN
⊙ = PRESSURE RELIEF VALVE	EXIT ONLY = EXIT ONLY SIGN
⊙ = WATER VALVE	DO NOT ENTER = DO NOT ENTER SIGN
⊙ = WATER WELL	⊙ = EVERGREEN TREE
⊙ = GAS VALVE	⊙ = DECIDUOUS TREE
⊙ = LIGHT POLE	⊙ = BUSH
⊙ = UTILITY POLE	⊙ = TEMPORARY CONSTRUCTION ENTRANCE
⊙ = PROPERTY CORNER	⊙ = GRASS PERMANENT SEEDING
IRF = IRON ROD FOUND	⊙ = EROSION CONTROL BLANKET ON ALL SLOPES 3:1 OR GREATER
RBF = REBAR FOUND	
△ = SURVEY POINT (SECTION CORNER)	
BM = BENCHMARK	
⊙ = SOIL BORING	
⊙ = STORM INLET	

LINETYPE LEGEND:	
(SF) — = SILT FENCE	— x — = BARB WIRE FENCE
— x — = CHAIN-LINK FENCE	— H — = WOOD FENCE
— W — = WATER LINE	— STRM — = STORM SEWER LINE
— SAN — = SANITARY SEWER LINE	— GAS — = GAS LINE
— UGE — = UNDERGROUND ELECTRIC LINE	— OHE — = OVERHEAD ELECTRIC LINE
— COMM — = COMMUNICATION LINE	— T — = TELEPHONE LINE
— UTELE — = UNDERGROUND TELEPHONE LINE	— FO — = FIBER OPTIC LINE
— W — = FIRE DEPARTMENT WATER SUPPLY	— 35' ESMT — = 35' EASEMENT LINE
— 30' ESMT — = 30' EASEMENT LINE	— 25' ESMT — = 25' EASEMENT LINE
— 20' ESMT — = 20' EASEMENT LINE	— 15' ESMT — = 15' EASEMENT LINE
— 10' ESMT — = 10' EASEMENT LINE	— 5' ESMT — = 5' EASEMENT LINE
— ESMT — = EASEMENT LINE	— SWALE — = SWALE LINE
— 000 — = EDGE OF WATER	— 35' SETBK — = 35' SETBACK LINE
— 30' SETBK — = 30' SETBACK LINE	— 25' SETBK — = 25' SETBACK LINE
— 20' SETBK — = 20' SETBACK LINE	— 15' SETBK — = 15' SETBACK LINE
— 10' SETBK — = 10' SETBACK LINE	— 5' SETBK — = 5' SETBACK LINE
— SETBK — = SETBACK LINE	— ROW — = RIGHT-OF-WAY LINE
— — = PROPERTY BOUNDARY	— UD — = SWALE UNDERDRAIN
— CABLE — = CABLE TV LINE	— FL > — = FLOW LINE
— TOB — = TOP OF BANK	

UTILITY CONTACT INFORMATION	
<b>WATER COMPANY:</b>	
NAME:	CITIZENS ENERGY
CONTACT NAME:	---
PHONE NUMBER:	(317) 924-3311
E-MAIL:	---
<b>SANITARY SEWER COMPANY:</b>	
NAME:	HENDRICKS CO. REGIONAL SEWER DIST.
CONTACT NAME:	---
PHONE NUMBER:	(317) 745-4928
E-MAIL:	---
<b>ELECTRIC COMPANY:</b>	
NAME:	DUKE ENERGY
CONTACT NAME:	---
PHONE NUMBER:	(317) 745-5473
E-MAIL:	---
<b>GAS COMPANY:</b>	
NAME:	VECTREN
CONTACT NAME:	---
PHONE NUMBER:	(800) 227-1376
E-MAIL:	---
<b>TELEPHONE COMPANY:</b>	
NAME:	AT&T
CONTACT NAME:	---
PHONE NUMBER:	(317) 272-6450
E-MAIL:	---

**UTILITY NOTES:**

**SANITARY GENERAL SPECIFICATIONS:**

(A) 100 PSI FLOWABLE FILL SHALL BE REQUIRED FOR ROAD CROSSINGS UNDER EXISTING PAVEMENT AND WITHIN FIVE (5) FEET OF THE PAVEMENT EDGE. STREET CUT REPAIRS SHALL USE 100 PSI FLOWABLE FILL TO WITHIN 6" OF PAVEMENT SURFACE. INSTALL 5" OF 4000 PSI READY MIX CONCRETE WITHIN 1" OF PAVEMENT 2-24 HOURS AFTER FLOWABLE FILL HAS BEEN INSTALLED. INSTALL 1" OF #11 SURFACE ASPHALT LEVEL WITH EXISTING PAVEMENT WITHIN 24 HOURS ON CONCRETE INSTALLATION.

(B) FLOWABLE FILL SHALL BE A MIXTURE OF SAND, PORTLAND CEMENT AND WATER, THOROUGHLY MIXED, AND SHALL HAVE 100 PSI COMPRESSIVE STRENGTH WITHIN 3 HOURS OF PLACEMENT. FLOWABLE FILL SHALL BE PLACED FROM TOP OF #8 STONE PIPE COVER TO BOTTOM OF NEW PAVEMENT.

(C) IN LOCATIONS OF NEW DEVELOPMENT, WHERE UTILITIES ARE INSTALLED PRIOR TO ROAD CONSTRUCTION, TRENCH BACKFILL UNDER FUTURE ROAD SHALL BE ENTIRELY #8 CRUSHED STONE FROM MANHOLES.

2. ALL OSHA SAFETY STANDARDS SHALL BE STRICTLY ENFORCED FOR PROTECTION OF WORKERS.

3. NO SEWER SYSTEM CONSTRUCTION MAY BEGIN UNTIL APPROVAL FROM I.D.E.M.

4. ONE SET OF I.D.E.M. APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES

**POLYVINYL CHLORIDE (P.V.C.) PIPE:**

1. PIPE DIAMETERS OF 10 INCHES THROUGH 15 INCHES SHALL MEET OR EXCEED ALL THE REQUIREMENTS OF ASTM D-3034, AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454-C. REFERENCE SHOULD BE MADE TO ASTM D-1784 FOR A SUMMARIZATION OF CELL CLASS PROPERTIES. PIPE DIAMETERS GREATER THAN 15 INCHES SHALL MEET OR EXCEED ALL REQUIREMENTS OF ASTM F-478, AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454-C. P.V.C. RIBBED SEWER PIPE SHALL MEET OR EXCEED ALL REQUIREMENTS OF ASTM F-794 AND SHALL HAVE A MINIMUM CELL CLASSIFICATION OF 12454.

2. THE MINIMUM WALL THICKNESS FOR PIPES OF 10 INCHES THROUGH 15 INCHES IN DIAMETER SHALL CONFORM TO SDR-35, TYPE PSM, AS SPECIFIED IN ASTM D-3034. THE MINIMUM WALL THICKNESS FOR PIPE DIAMETERS GREATER THAN 15 INCHES SHALL CONFORM TO T-1 AS SPECIFIED IN ASTM F-478. P.V.C. PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 40 POUNDS PER SQUARE INCH FOR EACH DIAMETER WHEN MEASURED AT FIVE PERCENT DEFLECTION AND TESTED IN ACCORDANCE WITH ASTM D-2412.

3. PIPE JOINTS SHALL HAVE A BELL WALL, GASKET GROOVE AND SPIGOT WHICH IS INTERGAL WITH THE PIPE. THE ASSEMBLY OF JOINTS SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS' RECOMMENDATIONS AND ASTM D-3212. NO SOLVENT CEMENT JOINTS SHALL BE ALLOWED. GASKET MATERIAL SHALL BE CONSTRUCTED OF STYRENE BUTADIENE OR BUTYL RUBBER AND MEET THE REQUIREMENTS OF ASTM F-477.

4. EACH PIPE SECTION SHALL BE MARKED WITH THE NAME OF THE MANUFACTURER, TRADEMARK OR TRADENAME, NOMINAL PIPE SIZE, PRODUCTION / EXTRUSION CODE, MATERIAL AND CELL CLASS DESIGNATION AND ASTM NUMBER.

5. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM RECOMMENDED PRACTICE D-2321.

**SANITARY SEWER NOTES:**

1. TO STATES STANDARDS AND INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS SHALL BE MET OR EXCEEDED FOR ALL DESIGN, MATERIALS AND CONSTRUCTION METHODS.

2. SANITARY SEWER MANHOLES SHALL BE MONOLITHIC PRECAST SECTIONS, INCLUDING THE BOTTOM SECTION. ALL SECTIONS SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C-478. ALL MANHOLE INLET CONNECTIONS SHALL BE LOCK JOINT FLEXIBLE SLEEVES CONFORMING TO ASTM C-923. ONLY PRECAST CONCRETE RINGS SHALL BE ALLOWED FOR CASTING RISERS. ALL MANHOLES, GRADE RINGS AND CASTING SHALL BE SEALED TO PREVENT INFILTRATION.

3. MANHOLE INVERTS SHALL BE SHAPED FOR FLOW CHANNELS WITH CONCRETE AND SMOOTHLY FINISHED BY A SEMI CIRCULAR SECTION CONFORMING TO THE INSIDE DIAMETER OF THE CONNECTING SEWERS. NO BRICK, ROCK OR SAND FILLERS WILL BE ALLOWED.

4. ALL MANHOLE COVERS SHALL BE TRAFFIC BEARING, NON-ROCKING DESIGN WITH NON-PENETRATING PICK HOLES.

5. SANITARY SEWERS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 MEETING ASTM D3034 SPECIFICATIONS. ALL SEWER MAINS SHALL HAVE A MINIMUM DIAMETER OF 8". ALL PIPE SPECIFIED SHALL SUPPORT ANTICIPATED LOADS.

6. ALL JOINTS SHALL BE PUSH-ON TYPE (SLIP SEAL) OR SOLVENT WELD.

7. BEDDING FOR PVC PIPE SHALL CONFORM TO BEDDING CLASSES I, II OF III, AS DESCRIBED IN ASTM D2321, FLEXIBLE SEWER PIPE INSTALLATION REQUIREMENTS.

**UTILITY NOTES (cont'd):**

8. ALL SEWER PIPE SHALL BE LAID USING PIPE LASER EQUIPMENT FOR BOTH VERTICAL AND HORIZONTAL ALIGNMENT.

9. MINIMUM ALLOWABLE COVER SHALL BE 5'-0" OVER TOP OF PIPE.

10. ALL SEWER MAINS SHALL BE DEFLECTION TESTED WITH AN 11 POINT, 5% MANDREL AFTER COMPACTED AGGREGATE IS IN PLACE FOR ALL STREETS. FLEXIBLE PIPE WILL BE TESTED AFTER BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. ALL PVC PIPE FAILING THE MANDREL TEST SHALL BE REROUNDED IN PLACE OR AN ALTERNATE METHOD APPROVED BY THE GOVERNING JURISDICTION IF REPAIR REQUIRED; SEWER SHALL BE RETESTED 30 DAYS AFTER REPAIR IS COMPLETE.

11. ALL SEWER MAINS SHALL BE LAMPED AT THE TIME THE MANDREL TEST IS CONDUCTED. ALL MAINS SHALL BE TRUE TO ALIGNMENT AND GRADE.

12. ALL SEWER MAINS AND LATERAL CONNECTIONS SHALL BE AIR TESTED IN ACCORDANCE WITH UNI-BELL UNI-8-85. MINIMUM TIME FOR THE AIR TEST SHALL BE FOR A 1.0 PSIG PRESSURE DROP. ALL SECTIONS FAILING AIR TEST SHALL BE REPAIRED AND RETESTED.

13. ALL SERVICE WYE BRANCHES SHALL BE INSTALLED AT THE TIME OF THE SEWER MAIN INSTALLATION. NO DIRECT TAPS WILL BE ALLOWED ON NEW MAIN CONSTRUCTION. NO VERTICAL CONNECTIONS WILL BE ALLOWED.

14. A SEPARATE (6" MINIMUM) SERVICE SHALL BE PROVIDED FOR EACH UNIT SERVED APPROXIMATELY SIX (6) FEET TO THE RIGHT OF THE LOT CENTERLINE. NO WYES SHALL BE ALLOWED, INCLUDING COMMONDUMINS.

15. THE MAXIMUM ALLOWABLE VERTICAL DISTANCE BETWEEN ANY INFLUENT LINE AND THE EFFLUENT MAIN SHALL BE 6' FOR TYPE 'A' AND 'C' MANHOLES. ANY DISTANCE GREATER THAN 6" SHALL REQUIRE A TYPE 'B' MANHOLE.

16. WHERE A SEWER EXTENSION OR IMPROVEMENT CONNECTS TO AN EXISTING SEWER OR MANHOLE, IT MUST BE LOCATED IN A STREET, ROAD OR HIGHWAY ROW AND NOT LOCATED IN SUCH A MANNER WHERE IT WILL CUT THROUGH LOTS OR DEVELOPMENTS.

17. ALL EXTENSIONS SHALL BE INSTALLED AT MINIMUM GRADES.

**CONCRETE MANHOLE NOTES:**

1. ALL MANHOLES SHALL BE NEGATIVE AIRE PRESSURE (VACUUM) TESTED AS PER ASTM C1244-93 STANDARD METHOD.

2. NO MANHOLES SHALL BE MORE THAN 14' FROM BACK OF CURB.

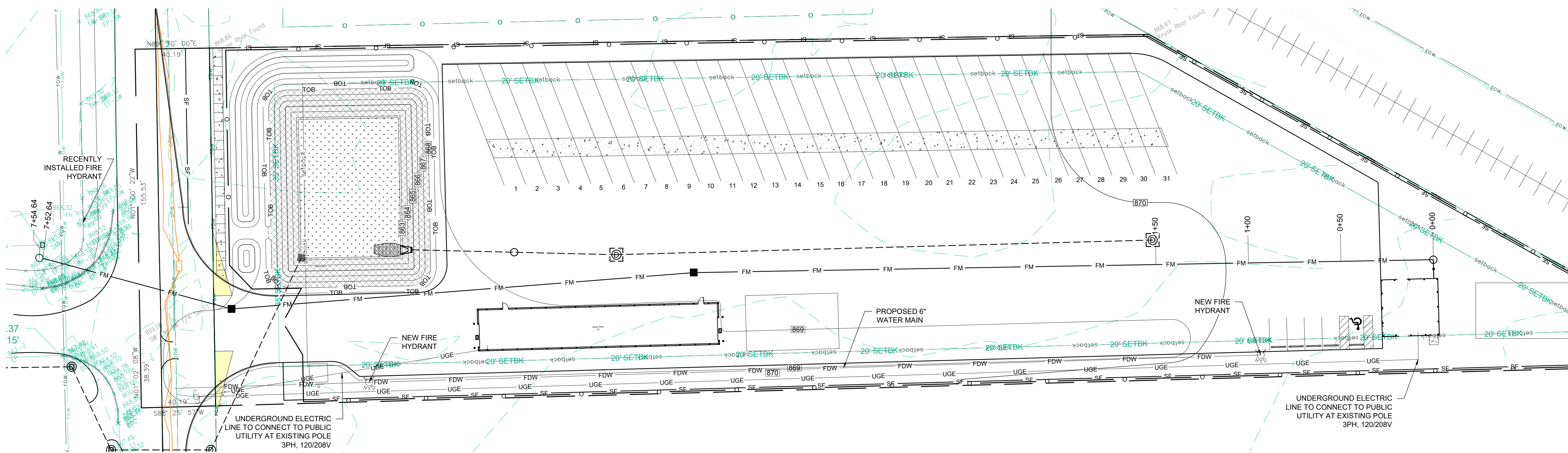
3. NO MANHOLE SHALL BE LOCATED IN ANY BACKYARD OR SIDE YARD. THEY MUST BE LOCATED IN THE FRONT YARD OR FRONT LOT THAT IS FRONTING A STREET.

4. ALL JOINTS IN MANHOLES SHALL BE SEALED TO PREVENT INFILTRATION BY USING A RUBBER 'O-RING' GASKET AND A 1/2" EXTRUDABLE PERFORMED GASKET BETWEEN ALL PRECAST SECTIONS.

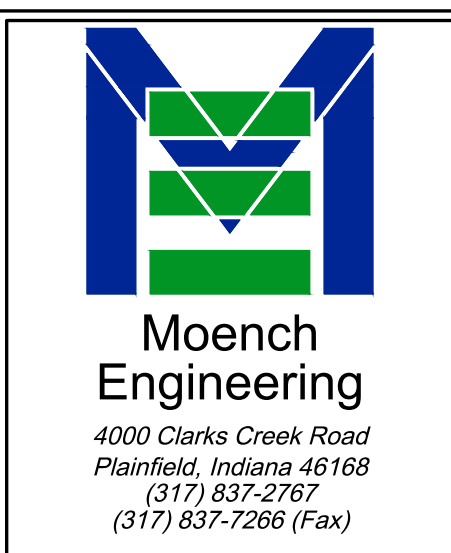
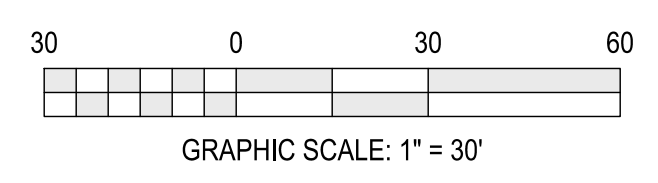
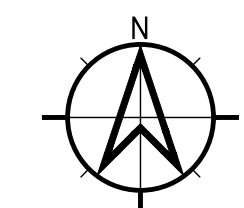
5. ANNUAL SPACE AROUND SANITARY SEWER AT POINT OF ENTRANCE INTO THE MANHOLE SHALL BE GROUDED COMPLETELY AROUND SANITARY SEWER, INSIDE AND OUTSIDE TO INSURE SMOOTH TRANSITION.

6. WHEN CONNECTING A NEW SEWER INTO AN EXISTING MANHOLE, THE EXISTING MANHOLE SHALL BE BROUGHT UP TO MEET PRESENT STANDARDS.

7. SECTION JOINTS ON PRECAST CONCRETE MANHOLES SHALL BE SEALED WITH BLACK TAR MASTIC 6" ABOVE AND 6" BELOW JOINT, ON MANHOLE EXTERIOR.



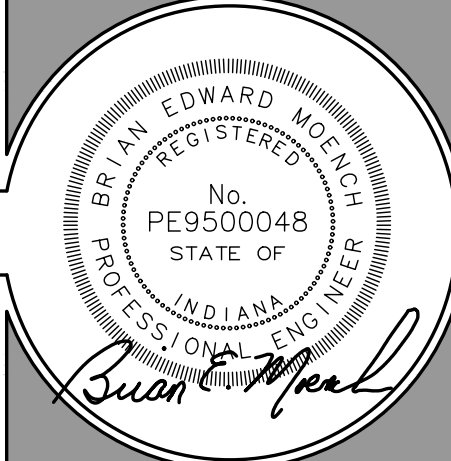
**UTILITY PLAN**  
SCALE: 1" = 30'



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 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

**UTILITY PLAN**



REVISIONS:		
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED per TOWN COMMENTS	9/09/24
4	REVISED per TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22  
 SHEET NUMBER:

**C401**



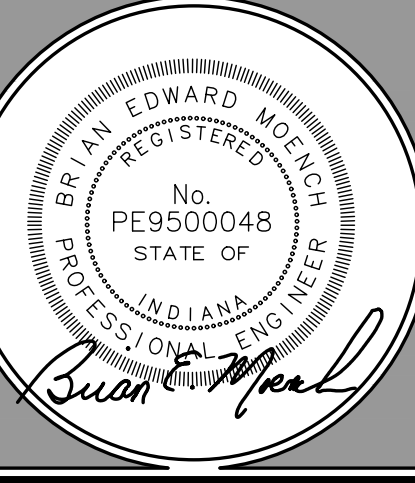


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**SANITARY FORCE MAIN PLAN & PROFILE**

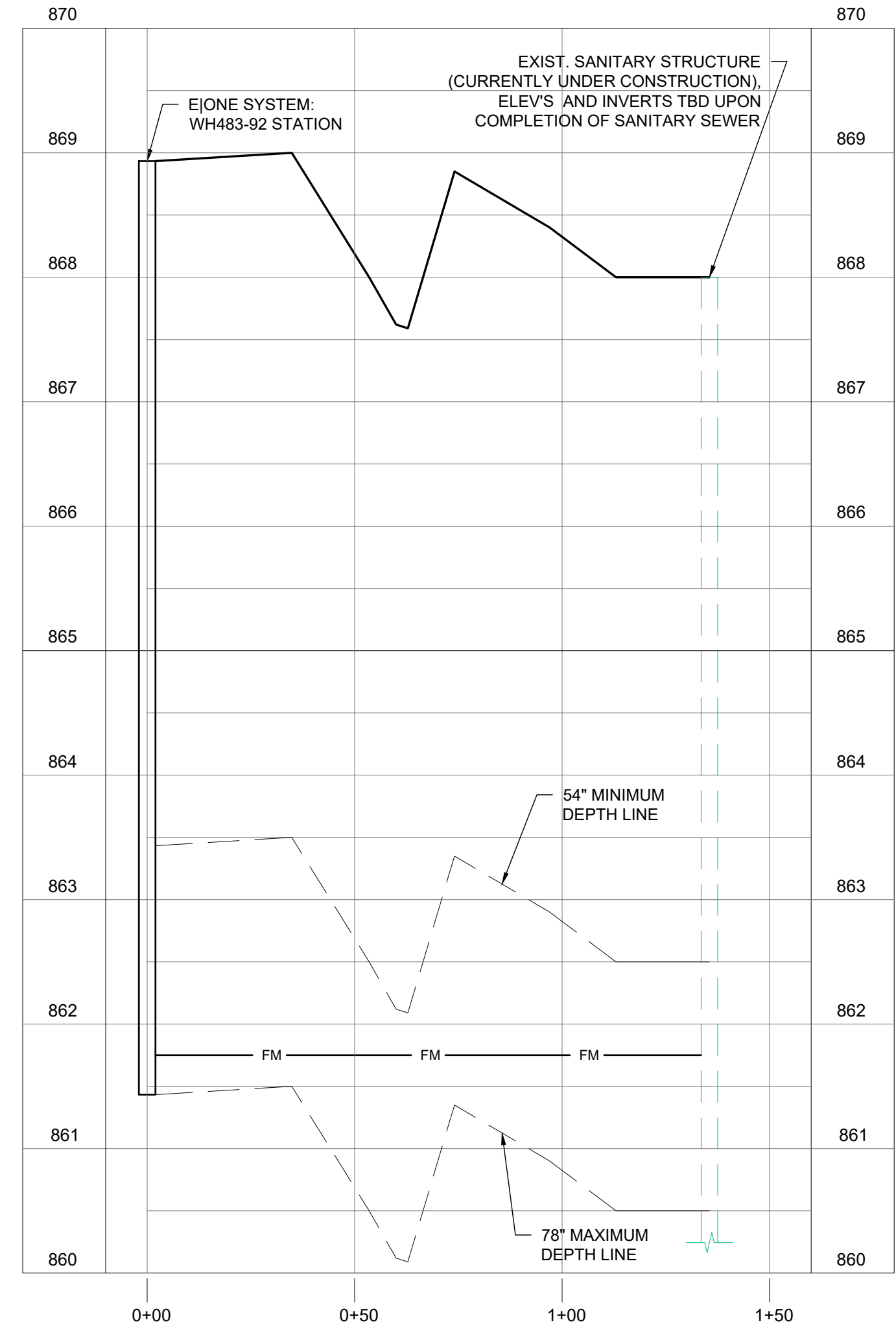
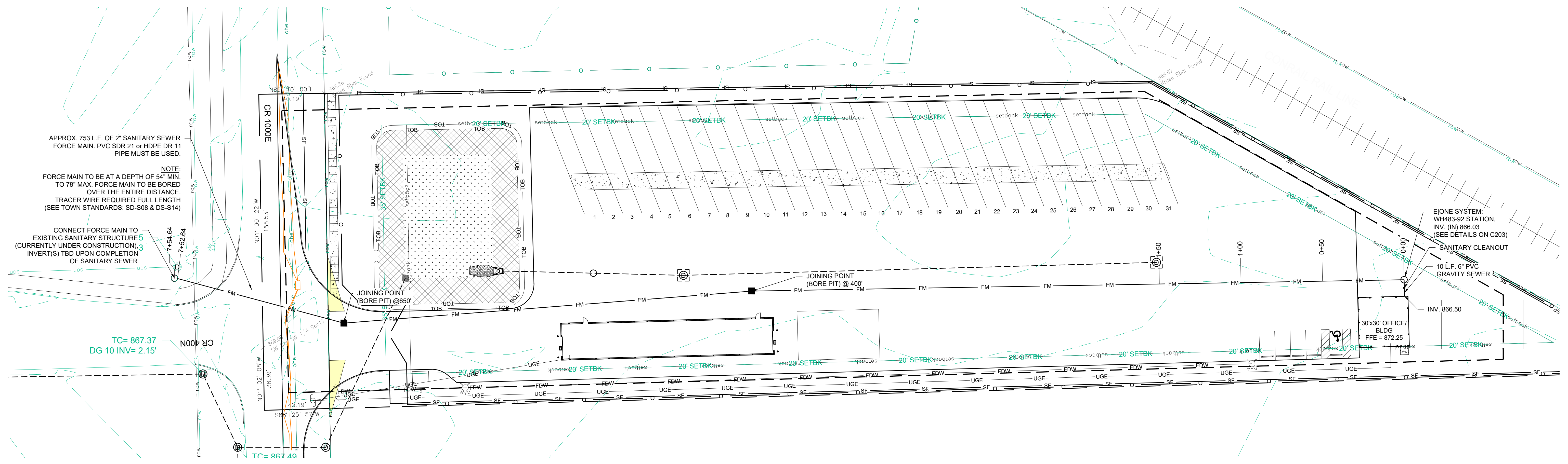


**REVISIONS:**

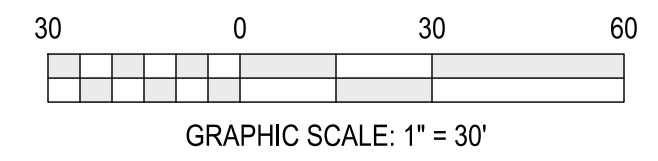
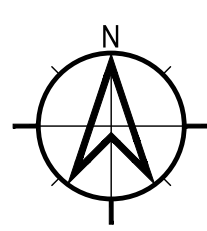
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3	REVISED per TOWN COMMENTS	9/09/24
4	REVISED per TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22  
 SHEET NUMBER:

**C402**



**FORCE MAIN PLAN + PROFILE**  
 SCALE: Horz.: 1" = 30', Vert.: 1" = 10'



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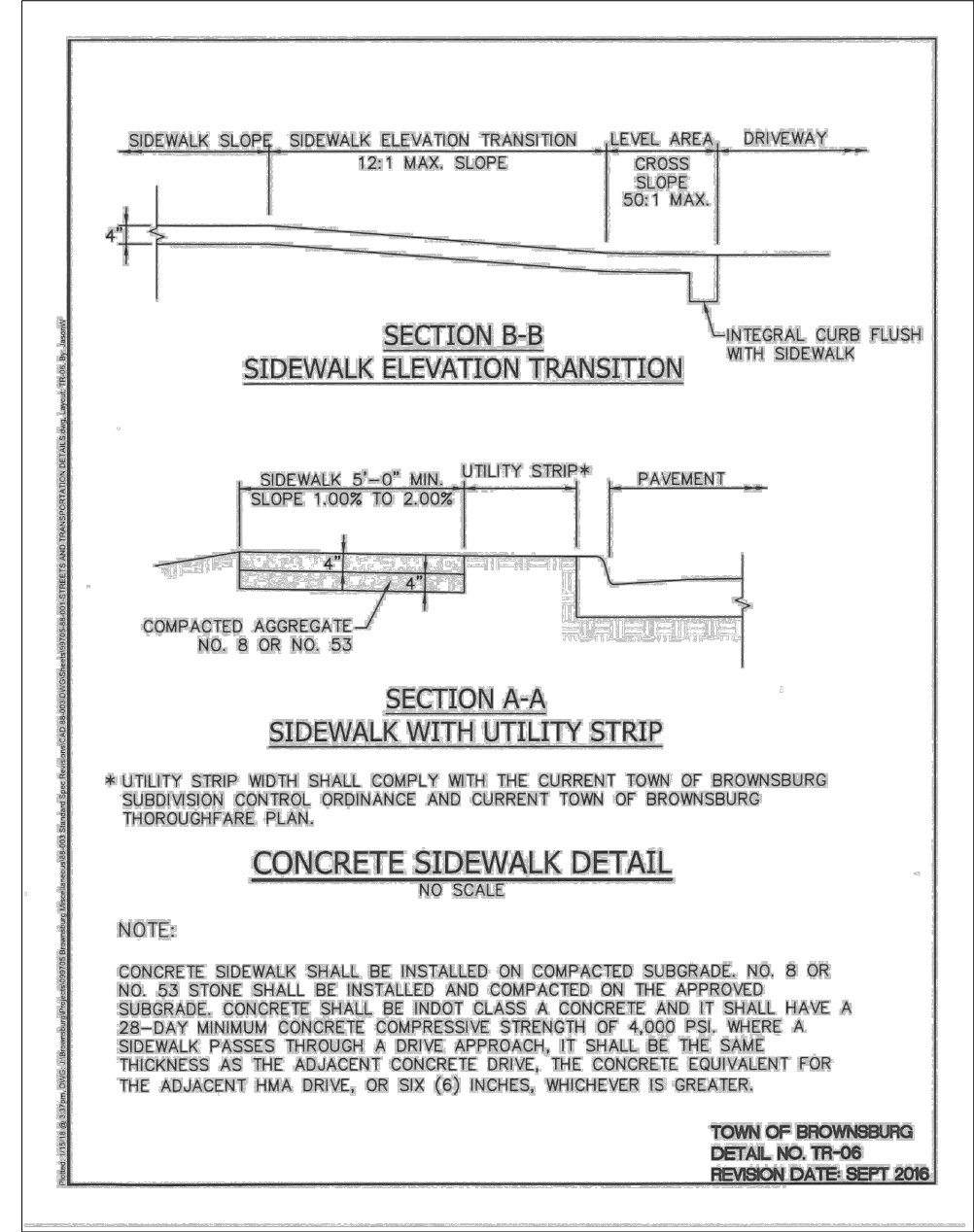


**REVISIONS:**

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5	REVISED STORM OUTLET	9/26/25

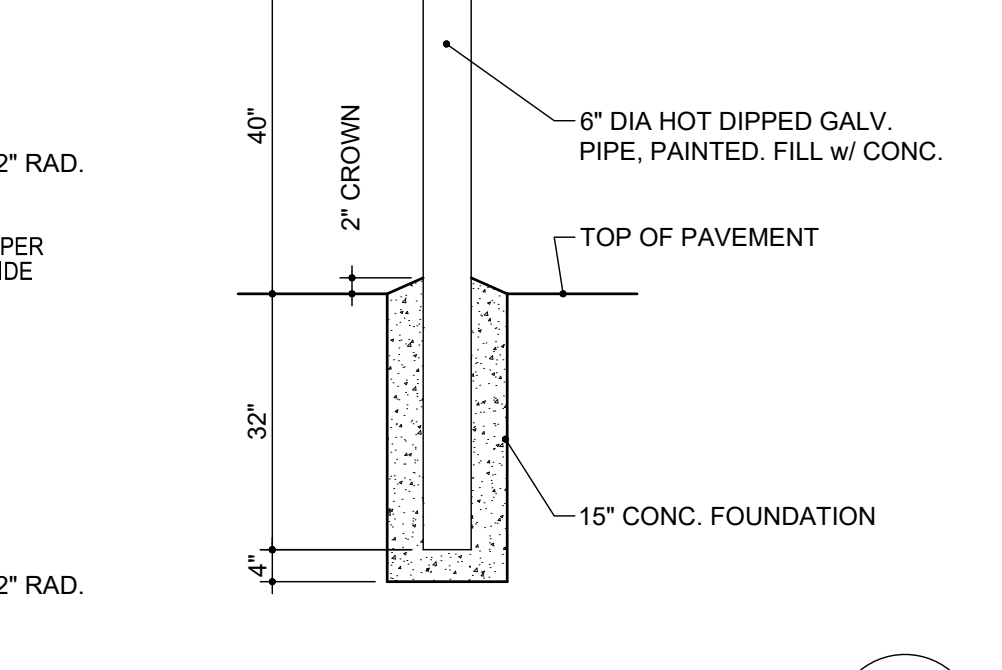
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DATE: 1/13/22  
SHEET NUMBER:

**C501**



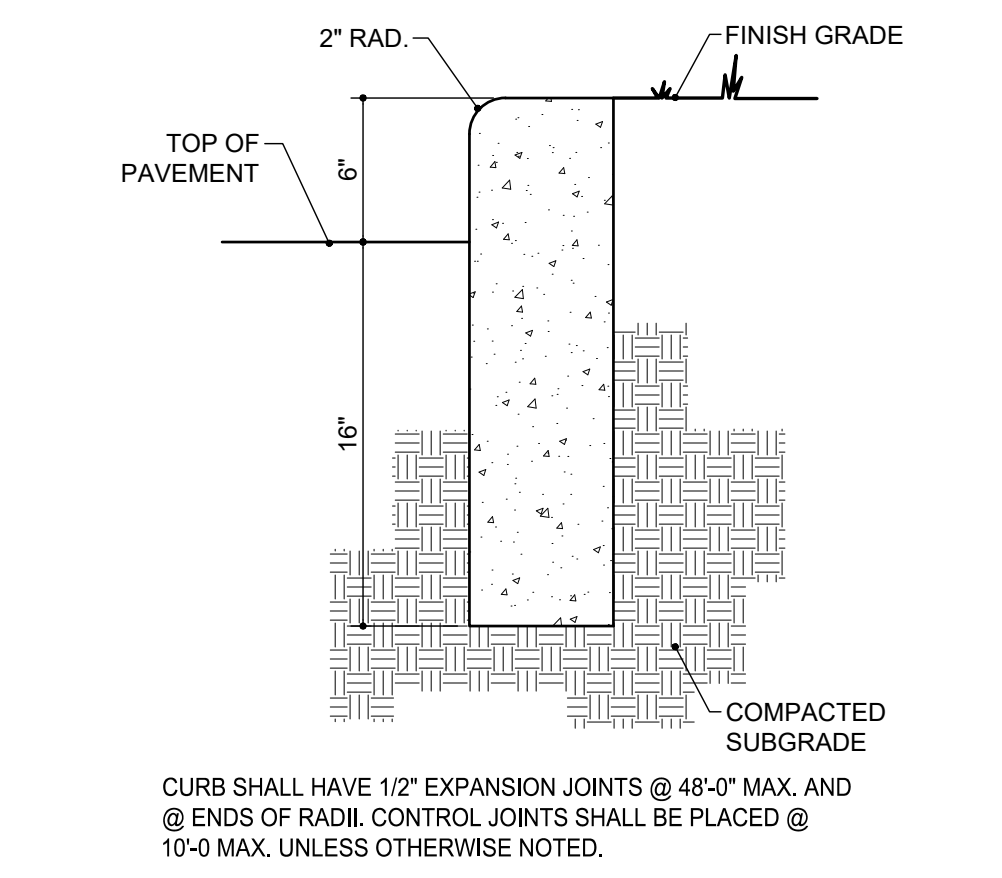
**CONCRETE SIDEWALK**  
NOT TO SCALE

7 C501



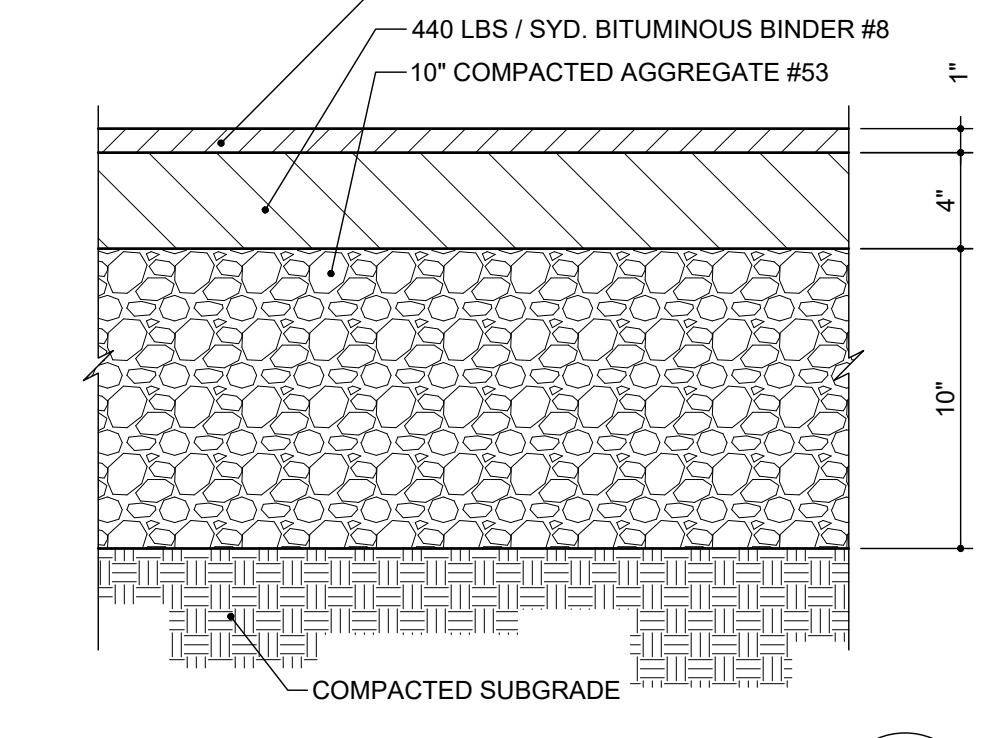
**PIPE BOLLARD**  
NOT TO SCALE

3 C501



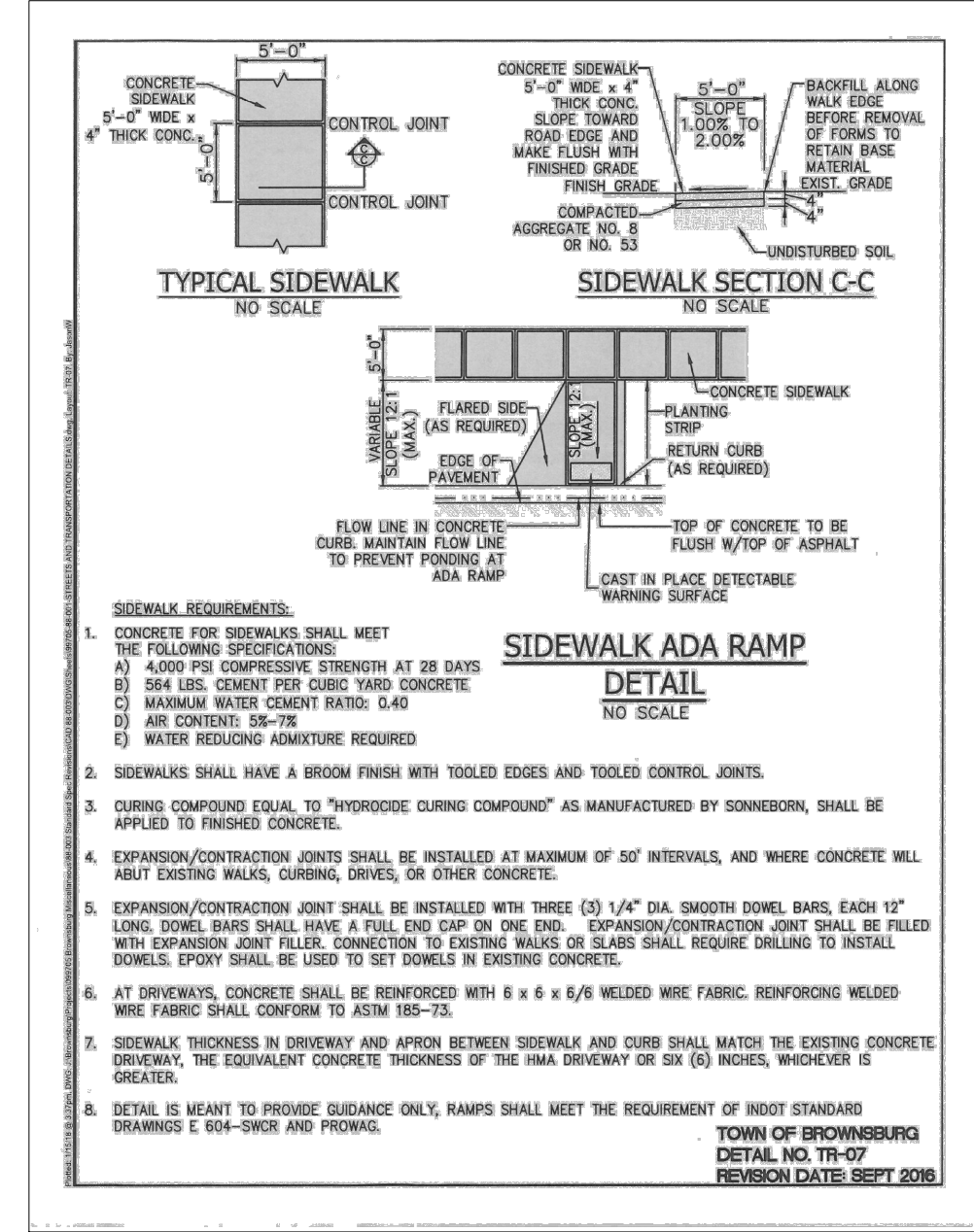
**STRAIGHT CURB**  
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2 C501



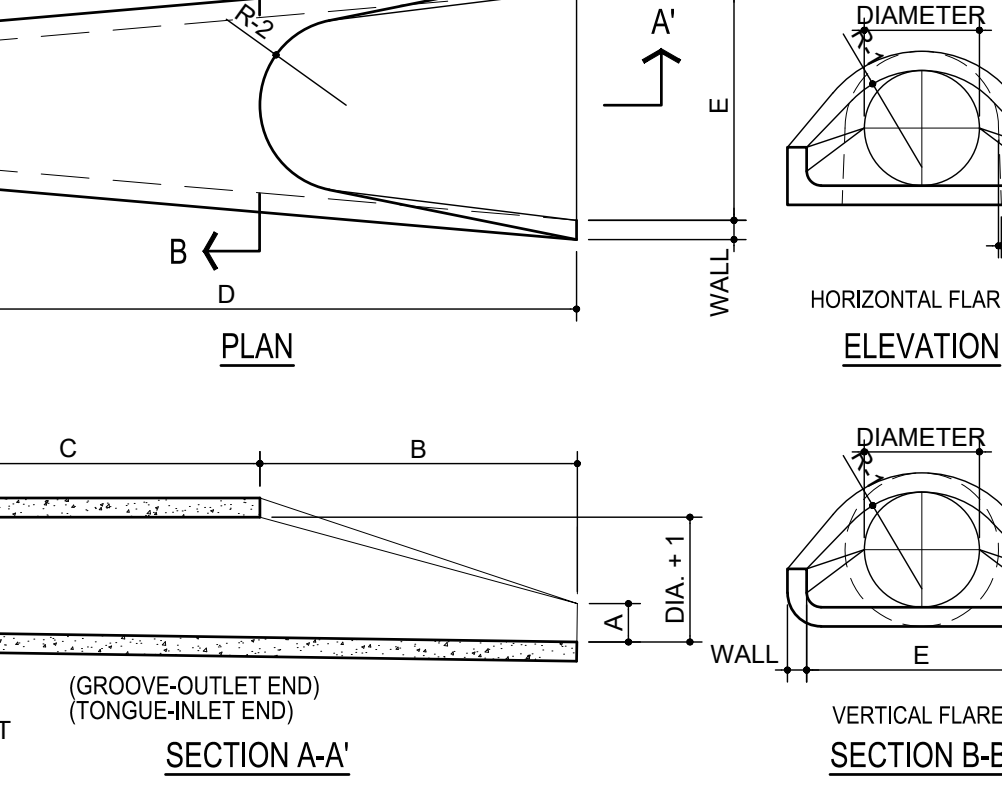
**HEAVY DUTY ASPHALT**  
NOT TO SCALE

1 C501



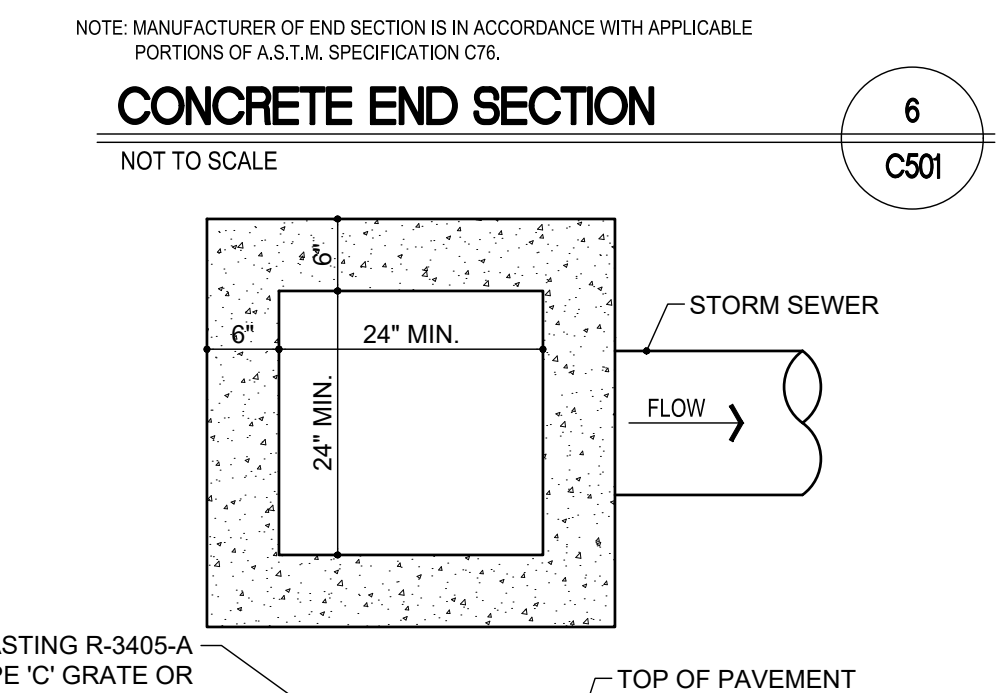
**HANDICAP RAMP**  
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7 C501



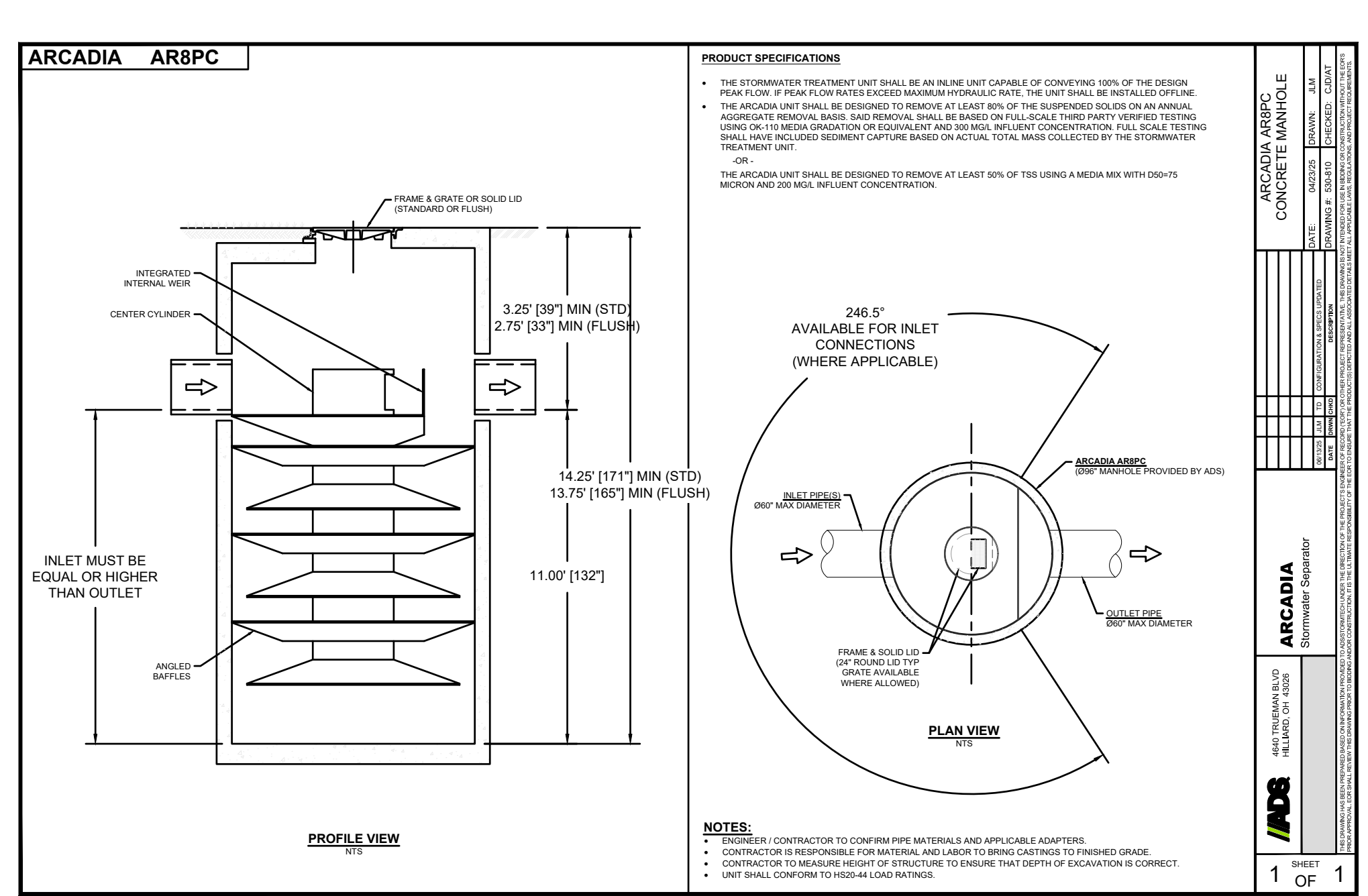
**CONCRETE END SECTION**  
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6 C501



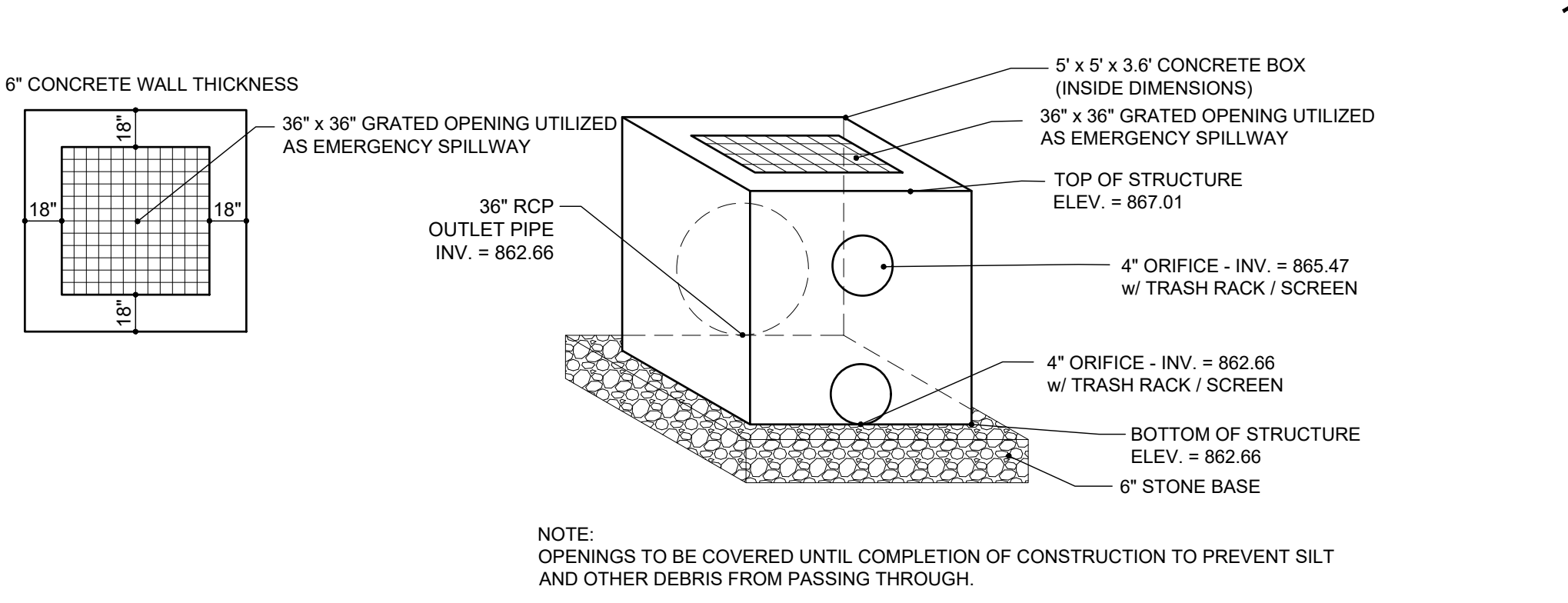
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NOT TO SCALE

5 C501



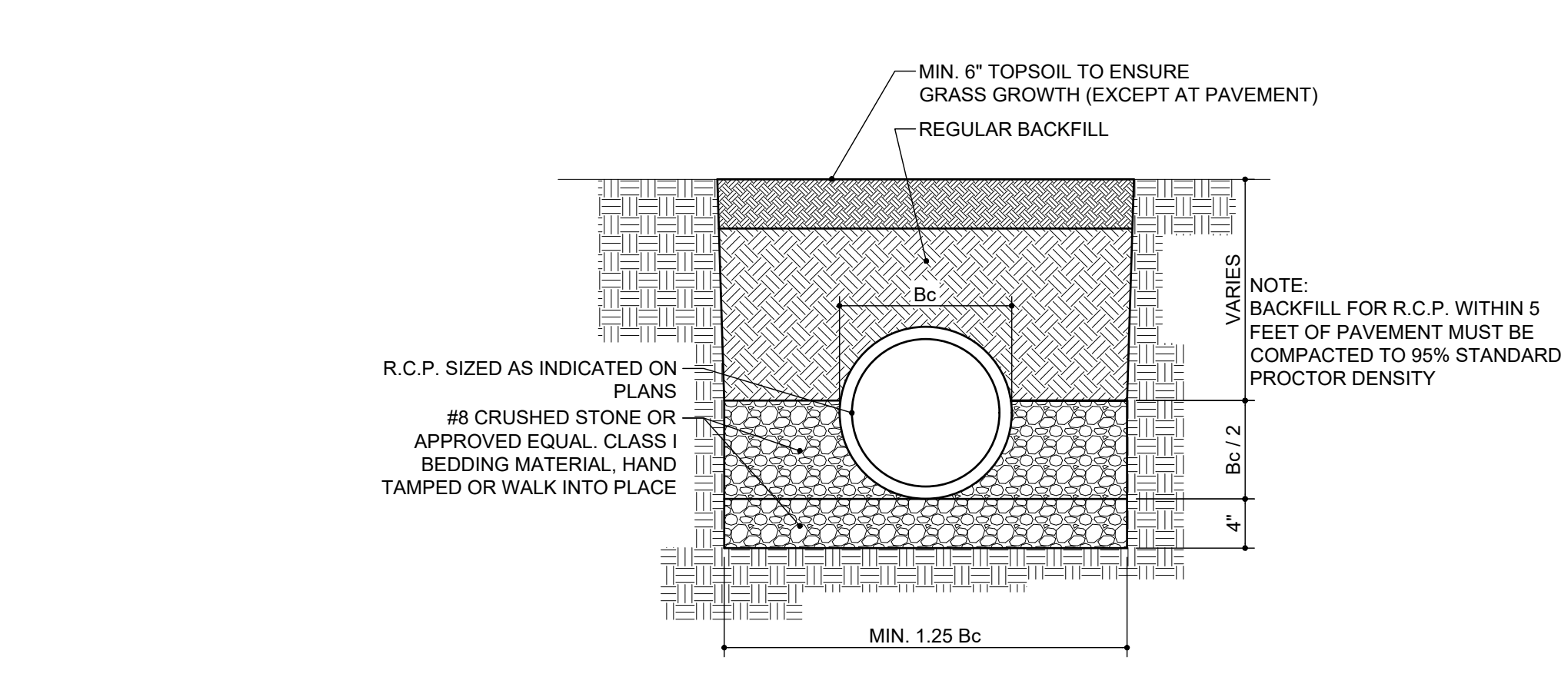
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10 C501



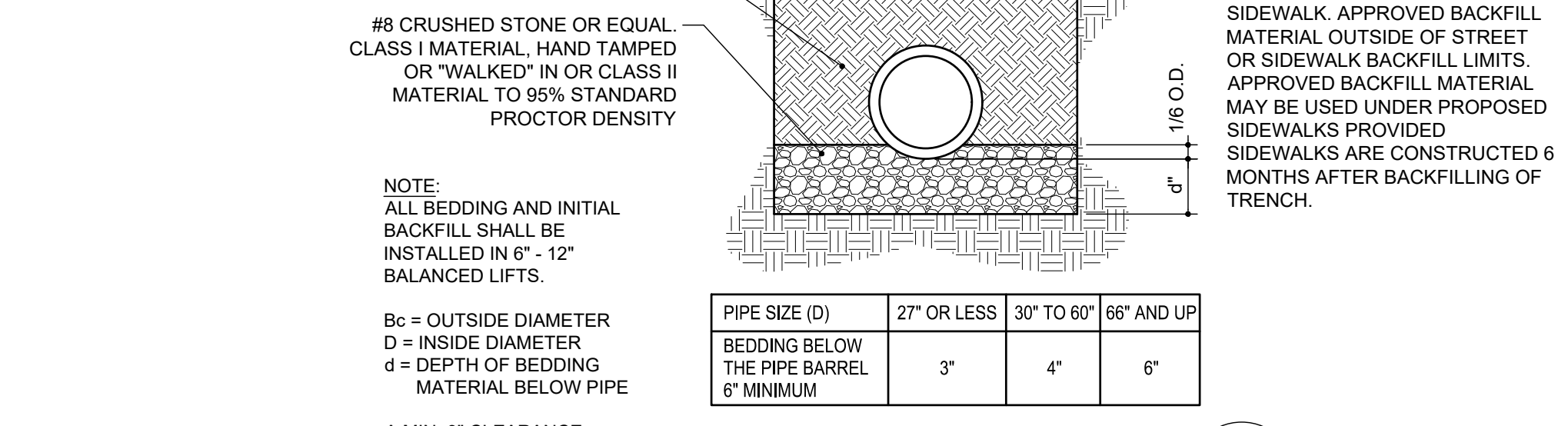
**OUTLET STRUCTURE DETAIL**  
NOT TO SCALE

9 C501



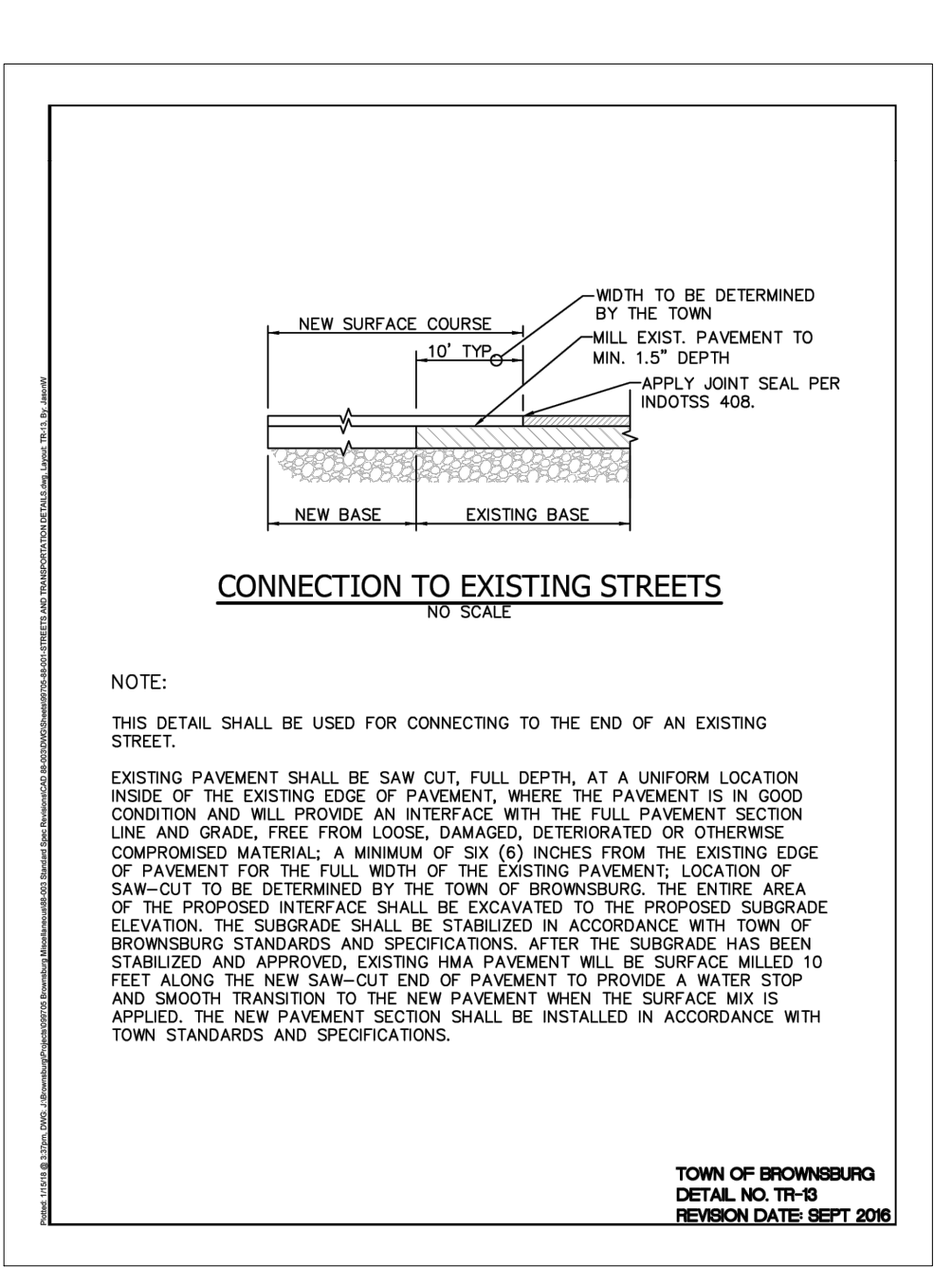
**R.C.P. PIPE TRENCH DETAIL**  
NOT TO SCALE

8 C501



**HANDICAP RAMP**  
NOT TO SCALE

11 C501



**HANDICAP RAMP**  
NOT TO SCALE

11 C501

**TOWN OF BROWNSBURG**  
DETAIL NO. TR-08  
REVISION DATE: SEPT. 2016

**TOWN OF BROWNSBURG**  
CONSTRUCTION STANDARDS  
SEPTEMBER 2016

**SECTION 02504 - ADJACENT ROADWAY IMPROVEMENTS**

**PART 1 - GENERAL**

1.01 Roadways adjacent to proposed developments shall conform to the following requirements and standards:

**A. Adjacent Roadway Improvements**

1. Developers shall be responsible for improvements to the existing roadway(s) that front their property. These improvements shall include, but are not limited to, the following items:

a. Construction of acceleration lanes, deceleration lanes, and passing bays for each entrance or street intersection as indicated in the Standard Details.

b. In order to construct adequate acceleration lanes, deceleration lanes, and passing bays, right-of-way shall be obtained which has a width consistent with the most current accepted Thoroughfare Plan.

c. The existing roadway along the development frontage shall be widened to match the width requirements based on the functional classification of the roadway as defined by the Thoroughfare Plan. Once widened, the entire roadway fronting the development shall be resurfaced for consistency.

2. Additional improvements may be required depending on field conditions and as determined by the Town of Brownsburg.

**PART 2 - PRODUCTS**

Not Used.

**PART 3 - EXECUTION**

Not Used.

**PART 4 - FIGURES**

4.01 Associated Standard Details

Detail No.	Description
TR-01	Concrete Chair Back Curb & Gutter
TR-02	Concrete Roof Curb & Gutter
TR-03	Driveway Curb Cut
TR-04	Curb Inlet Detail
TR-05	Concrete Center Curb
TR-06	Concrete Driveway
TR-10	Typical Cross Section
TR-11	Connection to Existing Streets
TR-14	Warning Detail
TR-16	Minimum Entrance Requirements

**TOWN OF BROWNSBURG, INDIANA**  
CONSTRUCTION STANDARDS  
SEPTEMBER 2016

**ADJACENT ROADWAY IMPROVEMENTS**  
02504-1

TR-17	Description
RS-01	Roadway Improvements at New Development Entrances
RS-02	Typical Cross Sections - Primary Arterials A1 and A2
RS-03	Typical Cross Sections - Primary Arterials B1 and B2
RS-04	Typical Cross Sections - Primary Arterials C1 and C2
RS-05	Typical Cross Sections - Secondary Arterials 1 and 2
RS-06	Typical Cross Sections - Collectors 1 and 2
RS-07	Typical Cross Sections - Neighbor Collectors 1 and 2 (Both Sides) and Local 3 (Parking One Side)
RS-08	Typical Cross Section
RS-09	Typical Cross Section - Local Street with Roadside Ditch
RS-10	Typical Cross Sections - Local Alternatives

**TOWN OF BROWNSBURG, INDIANA**  
CONSTRUCTION STANDARDS  
SEPTEMBER 2016

**ADJACENT ROADWAY IMPROVEMENTS**  
02504-2

**HANDICAP RAMP**  
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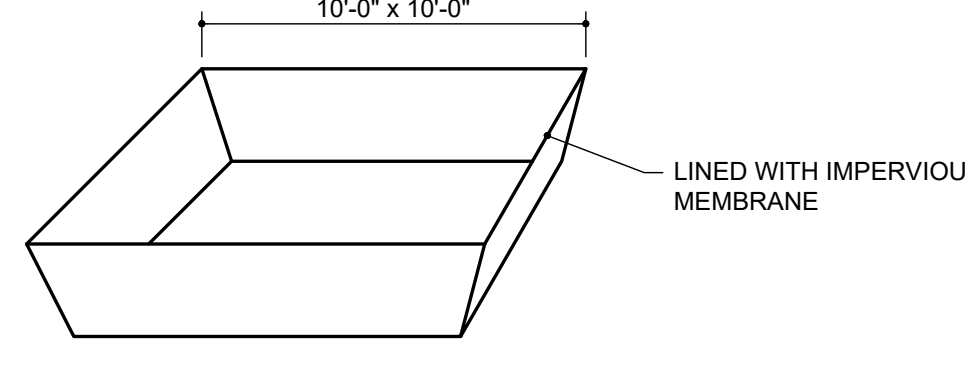
11 C501

REVISIONS:		
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	1/12/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY:	JBF
CHECKED BY:	BEM
PROJECT NUMBER:	21346
DATE:	1/13/22
SHEET NUMBER:	

C502

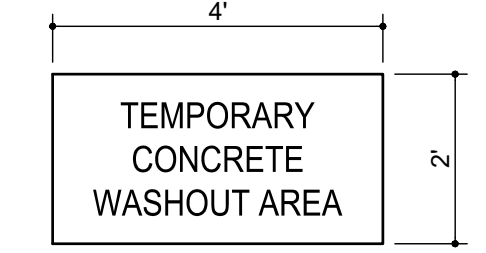
SECTIONS AND DETAILS



NOTE:  
1. A LINED ROLLOFF DUMPSTER OR CONTAINER TO BE USED IN LIEU OF A CONSTRUCTED WASHOUT BASIN.

**CONCRETE WASHOUT BASIN** 6

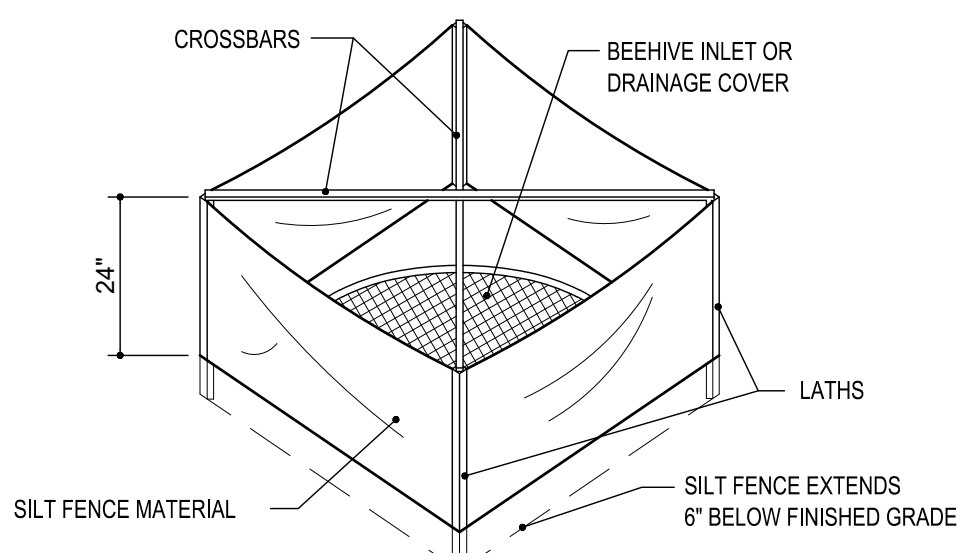
NOT TO SCALE C502



NOTES:  
1. SIGN TO BE POSTED THROUGHOUT CONSTRUCTION ACTIVITY.  
2. SIGN TO BE MADE OF SEMI-PERMANENT MATERIAL, I.E. WOOD.

**CONCRETE WASHOUT SIGN** 5

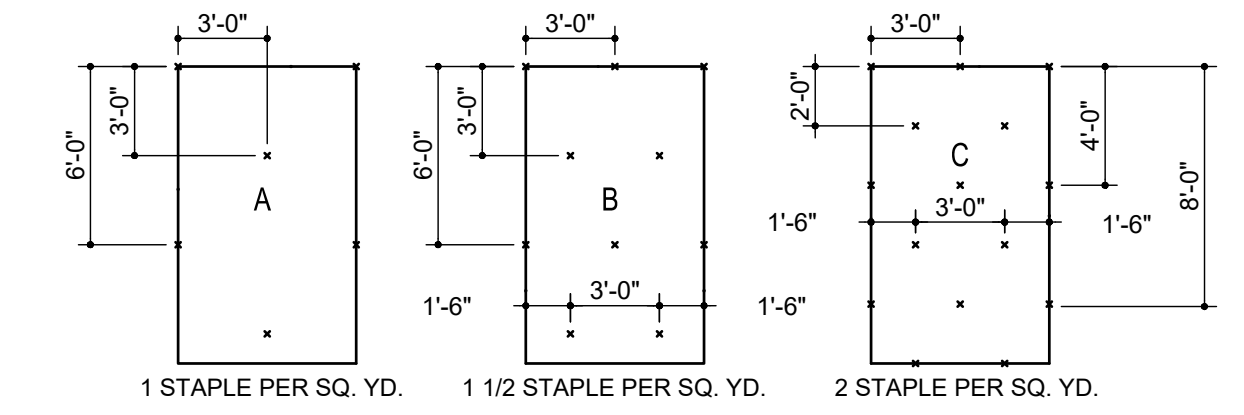
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NOTE:  
1. SEE SILT FENCE DETAIL FOR MATERIAL SPECIFICATIONS.  
2. SILT FENCE SHALL BE PREASSEMBLED BY SUPPLIER.

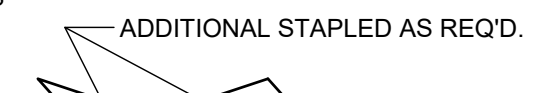
**SILT FENCE INLET PROTECTION DETAIL** 4

NOT TO SCALE C502



GENERAL STAPLE RECOMMENDATIONS

SLOPE LENGTH IN FEET	A	B	C	C	C
300					
275					
250					
225					
200					
175					
150					
125					
100					
75					
50					
25					



CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES.

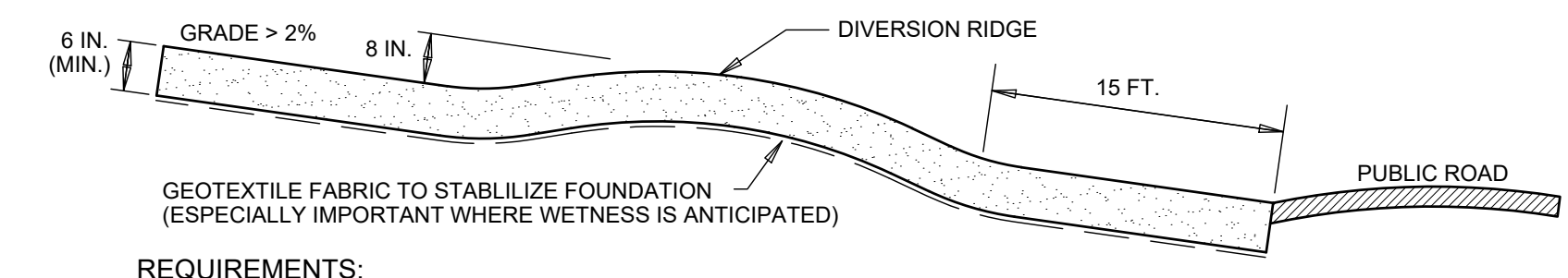
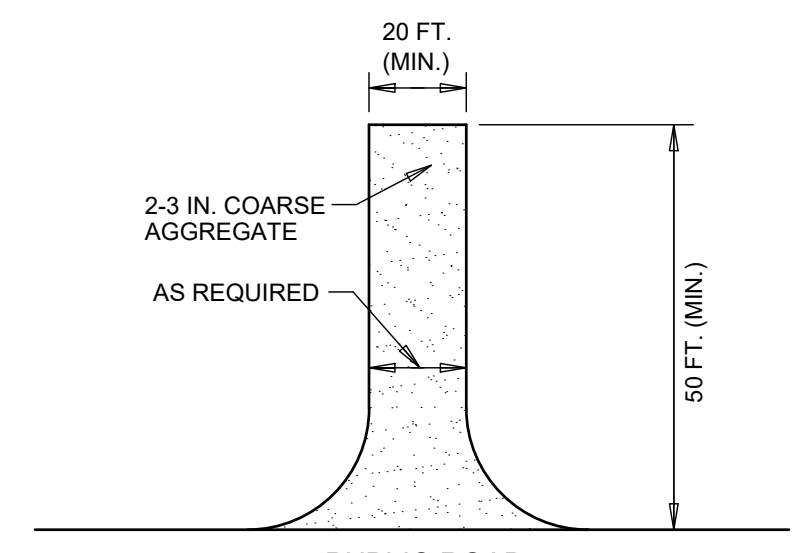
SLOPE GRADIENT

NOTES:  
1. STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION BLANKETS.  
2. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL.  
3. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.  
4. CHANNEL LININGS REQUIRE A 2' (MIN.) OVERLAP AT LONGITUDINAL JOINTS AND SIDE SLOPES REQUIRE A 6" (MIN.) OVERLAP. WHERE OVERLAPS OCCUR, THE UPSTREAM BLANKET SHALL OVERLAP THE DOWNSTREAM.  
5. NORTH AMERICAN GREEN S150BN TO BE USED FOR EROSION CONTROL BLANKETS.

NOTES:  
1. STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION BLANKETS.  
2. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL.  
3. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.  
4. CHANNEL LININGS REQUIRE A 2' (MIN.) OVERLAP AT LONGITUDINAL JOINTS AND SIDE SLOPES REQUIRE A 6" (MIN.) OVERLAP. WHERE OVERLAPS OCCUR, THE UPSTREAM BLANKET SHALL OVERLAP THE DOWNSTREAM.  
5. NORTH AMERICAN GREEN S150BN TO BE USED FOR EROSION CONTROL BLANKETS.

**EROSION CONTROL BLANKET STAPLE PATTERN** 2

NOT TO SCALE C502



GEOTEXTILE FABRIC TO STABILIZE FOUNDATION (ESPECIALLY IMPORTANT WHERE WETNESS IS ANTICIPATED)

**REQUIREMENTS:**

- Material: 2-3 in. washed stone (INDOT CA No.2) over a stable foundation.
- Thickness: 6 in. minimum
- Width: 12 ft. minimum or full width of entrance/exit roadway, whichever is greater.
- Length: 50 ft. minimum. The length can be shorter for small sites such as for an individual home.
- Washing facility (optional): Level area with 3 in washed stone minimum or a commercial rack, and waste water diverted to a sediment trap or basin.
- Geotextile fabric underliner: May be used under wet conditions or for soils within a high seasonal water table to provide greater bearing strength.

**INSTALLATION:**

- Avoid locating on steep slopes or at curves in public roads.
- Remove all vegetation and other objectionable material from the foundation area, and grade and crown for positive drainage.
- If slope towards the road exceeds 2%, construct a 6-8 in.-high water bar (ridge) with 3:1 side slopes across the foundation area about 15 ft. from the entrance to divert runoff away from the road.
- Install pipe under the pad if needed to maintain proper public road drainage.
- If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
- Place stone to dimensions and grade shown in the erosion control plan, leaving the surface smooth and sloped for drainage.
- Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.

**MAINTENANCE:**

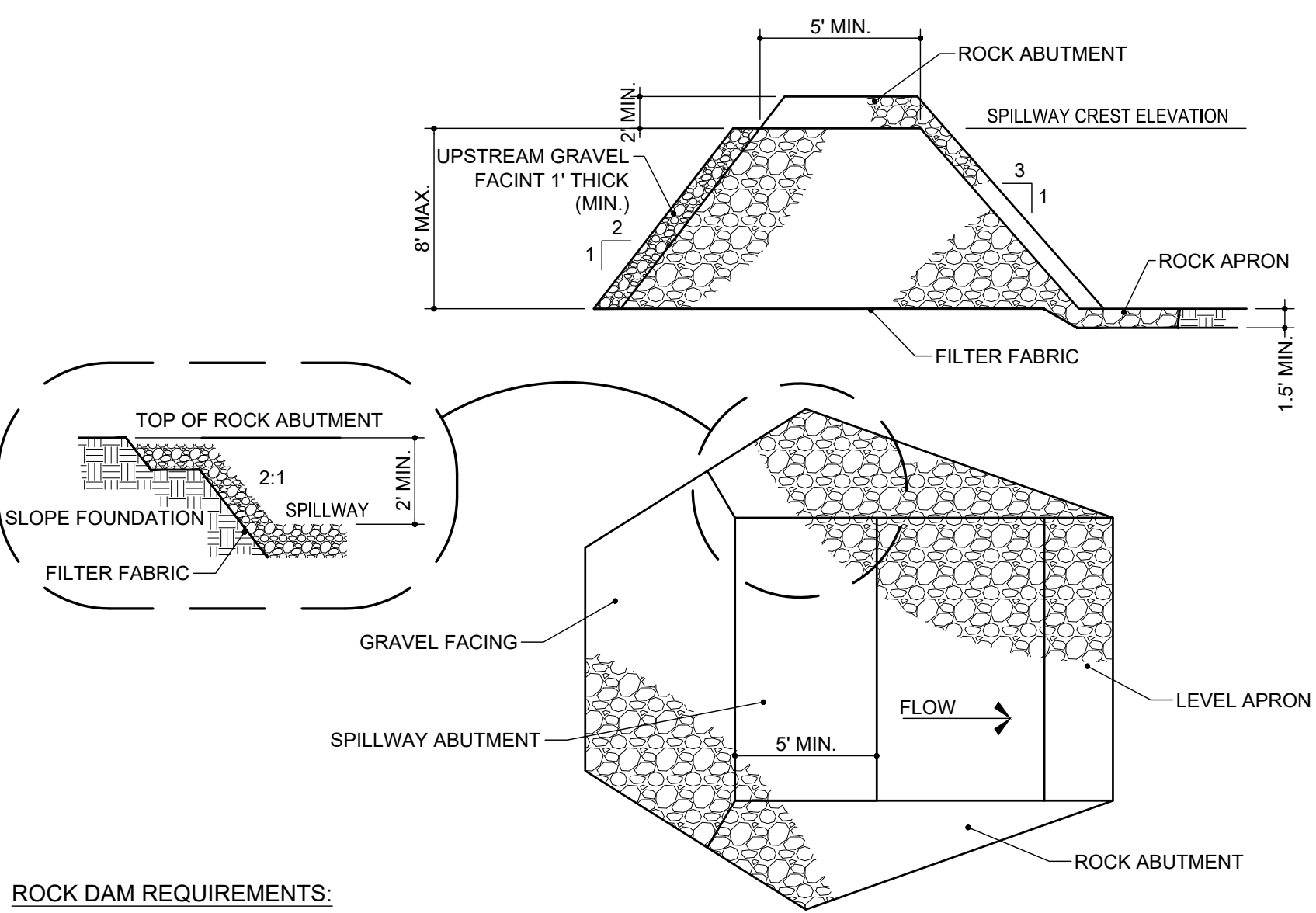
- Inspect entrance drive and sediment disposal area weekly and after storm events or heavy use.
- Reshape pad as needed for drainage and runoff control.
- Topdress with clean stone as needed.
- Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or basin.
- Repair any broken road pavement immediately.

**COMMON CONCERNS:**

- Inadequate runoff control--results in sediment washing onto road.
- Stone too small, pad too thin, or geotextile fabric absent--results in ruts and a muddy condition as stone is pressed into the soil: add more stone. Pad too short for heavy construction traffic--extend the pad beyond the 50-ft. length as needed.
- Pad not flared sufficiently at road entrance--results in mud being tracked onto the road and possible damage to the road edge: widen stone entrance and repair road damage.
- Unstable foundation--use geotextile fabric under th pad and/or improve foundation drainage.

**TEMPORARY CONSTRUCTION ENTRANCE** 1

NOT TO SCALE C502



**ROCK DAM REQUIREMENTS:**

- CONTRIBUTING DRAINAGE AREA: 50 ACRES MAXIMUM
- DESIGN LIFE: LIMITED TO 3 YRS.
- SEDIMENT STORAGE: 1,800 CU.FT./ACRE DISTURBED (MINIMUM) MEASURED 1 FT. BELOW SPILLWAY CREST.
- BASIN SHAPE: MINIMUM 2:1 LENGTH-TO-WIDTH RATIO.
- BASIN AREA: VARIABLE; THE LARGER THE SURFACE AREA THE GREATER THE TRAPPING EFFICIENCY.
- DAM CREST HEIGHT: LIMITED TO 8 FT.
- SPILLWAY CAPACITY: PEAK RUNOFF FROM A 10-YR. FREQUENCY, 24-HR. DURATION STORM EVENT, A MAXIMUM FLOW DEPTH OF 1 FT. AND MINIMUM FREEBOARD OF 1 FT. (ENTIRE LENGTH OF DAM BETWEEN ROCK ABUTMENTS MAY SERVE AS SPILLWAY.)
- DAM DIMENSIONS: TOP WIDTH, 5 FT. MINIMUM; SIDE SLOPES, 2:1 OR FLATTER UPSTREAM, 3:1 OR FLATTER DOWNSTREAM.
- EARTH ABUTMENTS: SMOOTH, STABLE, 2:1 OR FLATTER SLOPES.
- ROCK ABUTMENTS (TO PROTECT EARTH ABUTMENTS): EXTENDED ALONG DOWNSTREAM FACE TO TOE OF DAM AND AT LEAST 1 FT. HIGHER THAN SPILLWAY FACE AT ALL POINTS, 2 FT. ABOVE SPILLWAY CREST, AND 1 FT. THICK, WITH 2:1 OR FLATTER SIDE SLOPES.
- OUTLET PROTECTION: ROCK APRON, 1-1/2 FT. THICK (MINIMUM), ZERO GRADE, WITH LENGTH EQUAL TO HEIGHT OF DAM OR EXTENDED TO STABLE GRADE, WHICHEVER IS GREATER.
- ROCK MATERIAL: INDOT REVETMENT RIPRAP.
- PROTECTION FROM PIPING: GEOTEXTILE FABRIC FOR SEPARATION AND FILTRATION COVERING ENTIRE FOUNDATION, INCLUDING EARTH ABUTMENTS AND APRON.
- BASIN DE-WATERING: THROUGH A 1 FT. THICK LAYER OF INDOT CA NO. 5 STONE ON UPSTREAM FACE OF THE DAM.

**INSTALLATION**

- SITE PREPARATION:**
- DIVERT RUNOFF FROM UNDISTURBED AREAS AWAY FROM THE ROCK DAM AND BASIN AREA.
  - EXCAVATE THE FOUNDATION FOR THE APRON, USING IT AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION OF THE DAM.
  - CLEAR AND GRUB THE AREA UNDER THE DAM, REMOVING AND PROPERLY DISPOSING OF ALL ROOT MAT, BRUSH, AND OTHER DEBRIS.
  - GRADE THE EARTH ABUTMENTS NO STEEPER THAN 2:1.
- DAM AND BASIN CONSTRUCTION**
- EXCAVATE A CUTOFF TRENCH AT THE CENTER LINE OF THE DAM, EXTENDING ALL THE WAY UP THE EARTH ABUTMENTS, AND BACKFILL WITH COMPACTED EARTH FILL.
  - SMOOTH THE DAM FOUNDATION.
  - COVER THE ENTIRE FOUNDATION, INCLUDING BOTH EARTH ABUTMENTS, WITH GEOTEXTILE FABRIC, MAKING SURE THE UPSTREAM STRIPS OVERLAP THE DOWNSTREAM STRIPS AT LEAST 1 FT.
  - CONSTRUCT THE DAM TO PLANNED DIMENSIONS.
  - ONCE THE DAM IS IN PLACE, CLEAR THE SEDIMENT BASIN AREA, PROPERLY DISPOSING OF THE CLEARED MATERIAL.
  - SET A MARKER STAKE TO INDICATE THE CLEANOUT ELEVATION (I.E., POINT AT WHICH THE BASIN IS 50% FULL OF SEDIMENT).
  - DIVERT CONSTRUCTION SITE RUNOFF FLOW INTO THE UPPER END OF THE BASIN USING TEMPORARY DIVERSIONS.
  - STABILIZE ALL DISTURBED AREAS EXCEPT THE LOWER HALF OF THE BASIN.

**SAFETY PRECAUTIONS:**

- BECAUSE SEDIMENT BASINS THAT IMPOUND WATER ARE HAZARDOUS, (A) BE SURE SIDE SLOPES ARE 2:1 OR FLATTER, (B) FENCE WITH WARNING SIGNS IF TRESPASSING IS LIKELY, (C) DE-WATER THE BASIN BETWEEN STORM EVENTS, AND (D) FOLLOW ALL STATE AND LOCAL IMPOUNDMENT SITE REQUIREMENTS.

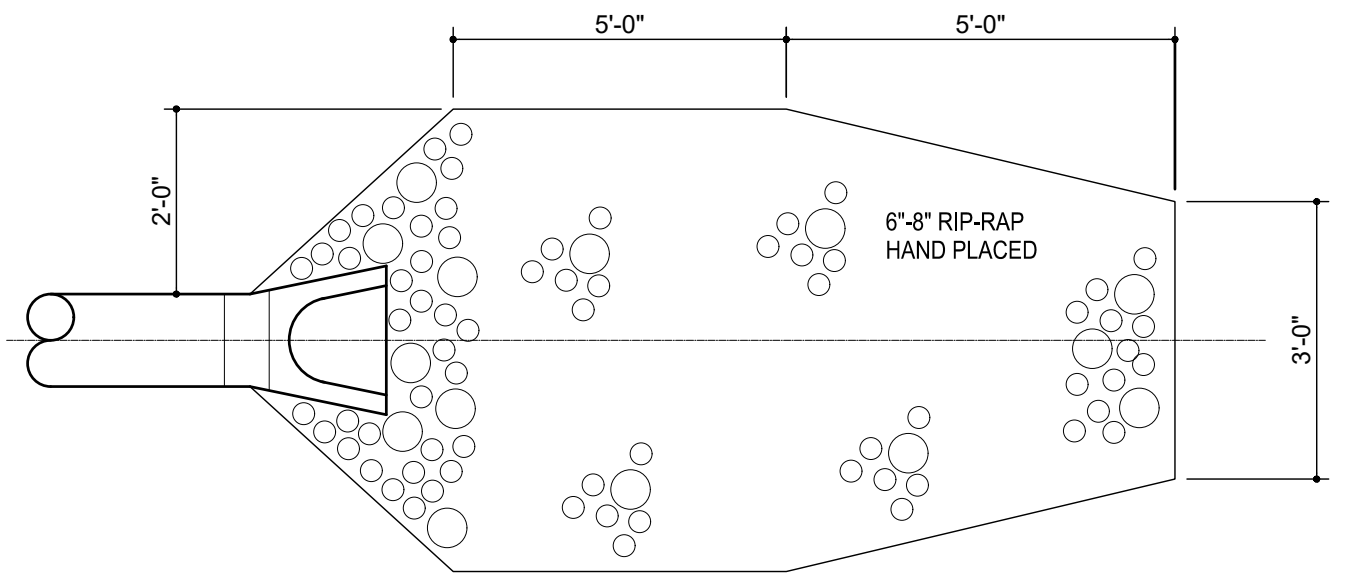
**MAINTENANCE**

- INSPECT THE ROCK DAM AND BASIN AFTER EACH STORM EVENT.
- REMOVE SEDIMENT WHEN IT ACCUMULATES TO HALF THE DESIGN VOLUME (MARKED BY A STAKE).
- CHECK THE DAM AND ABUTMENTS FOR EROSION, PIPING, OR ROCK DISPLACEMENT, AND REPAIR IMMEDIATELY.
- IF THE BASIN DOES NOT DRAIN BETWEEN STORMS, REPLACE THE STONE ON THE UPSTREAM FACE OF THE DAM.
- IF THE BASIN DRAINS TOO RAPIDLY FOLLOWING A STORM (I.E., LESS THAN 6 HRS.), ADD INDOT CA NO. 5 GRAVEL ON THE UPSTREAM FACE OF THE DAM.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, (A) REMOVE WATER AND SEDIMENT FROM THE BASIN; (B) REMOVE THE DAM, DISPOSING OF THE ROCK IN DESIGNATED DISPOSAL AREAS; (C) SMOOTH THE SITE TO BLEND WITH THE SURROUNDING AREA; AND (D) STABILIZE.

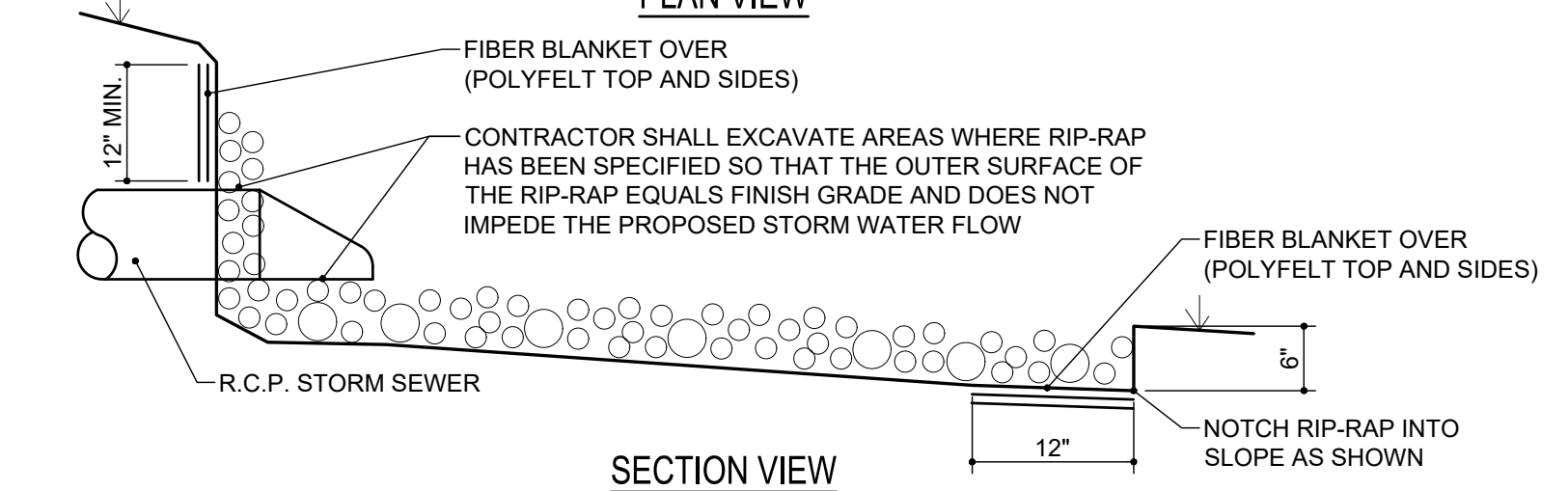
**COMMON CONCERNS:**  
FAILURE FROM PIPING ALONG ABUTMENTS-BECAUSE THE FILTER MATERIAL WAS NOT PROPERLY INSTALLED OR THE EARTH ABUTMENTS ARE TOO STEEP. STONE DISPLACEMENT FROM FACE OF DAM-BECAUSE STONE SIZE IS TOO SMALL OR THE FACE IS TOO STEEP. EROSION BELOW DAM BECAUSE THE APRON WAS NOT EXTENDED TO STABLE GRADE. EROSION OF ABUTMENTS DURING SPILLWAY FLOW-BECAUSE THE ROCK ABUTMENT IS NOT HIGH ENOUGH. SEDIMENT CARRIED THROUGH SPILLWAY-BECAUSE THE DRAINAGE AREA IS TOO LARGE; TO SOLVE, DIVERT RUNOFF FROM THE UNDISTURBED AREA AWAY FROM THE BASIN. SEDIMENT LOSS THROUGH DAM-BECAUSE THE LAYER OF AGGREGATE ON THE UPSTREAM FACE IS NOT THICK ENOUGH OR IS TOO COARSE TO RESTRICT FLOW THROUGH THE DAM.

**ROCK DAM** 8

NOT TO SCALE C502



**PLAN VIEW**



**SECTION VIEW**

**RIP-RAP REQUIREMENTS:**

- CONTRIBUTING DRAINAGE AREA: 100 ACRES MAXIMUM.
- CAPACITY: PEAK RUNOFF FROM 10-YR. FREQUENCY, 24-HR. DURATION STORM EVENT.
- APRON: DESIGN DEPENDS ON CHANNEL DEFINITION, BUT IS LONG ENOUGH TO DISSIPATE RUNOFF ENERGY. SET ON ZERO GRADE, STRAIGHT AND ALIGNED WITH THE RECEIVING STREAM. (IF SITE CONDITIONS REQUIRE A CURVE, SET IT NEAR THE UPSTREAM END.)
- FOUNDATION: GEOTEXTILE FABRIC FOR STABILIZATION AND FILTRATION OR WELL-GRADED GRAVEL FILTER LAYER AT LEAST 6 IN. THICK.
- MATERIAL: HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT RIPRAP STONE OF 6 - 8 INCHES IN SIZE.
- THICKNESS: 12 IN. MINIMUM OR TWO TIMES THE D 50 STONE DIAMETER,WHICHEVER IS GREATER.

**INSTALLATION:**

- EXCAVATE THE APRON AREA SUBGRADE BELOW DESIGN ELEVATION TO ALLOW FOR THICKNESS OF THE FILTER (OR GRAVEL LAYER) AND THE RIPRAP. (THIS OVER-EXCAVATION GREATLY INCREASES THE AMOUNT OF SPOIL.)
- COMPACT ANY FILL USED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL, AND SMOOTH ENOUGH TO PROTECT FABRIC FROM TEARING.
- PLACE THE GEOTEXTILE FABRIC (OR GRAVEL LAYER) ON THE COMPACTED AND SMOOTHED FOUNDATION. IF MORE THAN ONE FABRIC PIECE IS NEEDED, THE UPSTREAM PIECE SHOULD OVERLAP THE DOWNSTREAM PIECE BY AT LEAST 1 FT.
- INSTALL THE RIPRAP TO THE LINES AND ELEVATIONS SHOWN IN THE DESIGN. IF THE CHANNEL IS POORLY DEFINED, THE FINAL CROSS-SECTION SHOULD BE LEVEL OR SLIGHTLY DEPRESSED IN THE MIDDLE; IF WELL DEFINED, THE FILTER (OR GROUND LAYER) AND RIPRAP SHOULD EXTEND TO THE TOP OF THE BANK.
- IF THE GEOTEXTILE FABRIC TEARS WHEN PLACING TH RIPRAP, REPAIR IMMEDIATELY BY LAYING AND STAPLING A PIECE OF FABRIC OVER THE DAMAGE AREA, OVERLAPPING THE UNDAMAGED AREAS BY AT LEAST 12 INCHES.
- MAKE SURE THE TOP OF THE RIPRAP APRON IS LEVEL WITH OR SLIGHTLY BELOW THE RECEIVING STREAM. (RIPRAP SHOULD NOT RESTRICT THE CHANNEL OR PRODUCE AN OVERFALL.)
- BLEND THE RIPRAP SMOOTHLY TO THE SURROUNDING GRADE.
- STABILIZE ALL DISTURBED AREAS IMMEDIATELY FOLLOWING INSTALLATION.

**MAINTENANCE:**

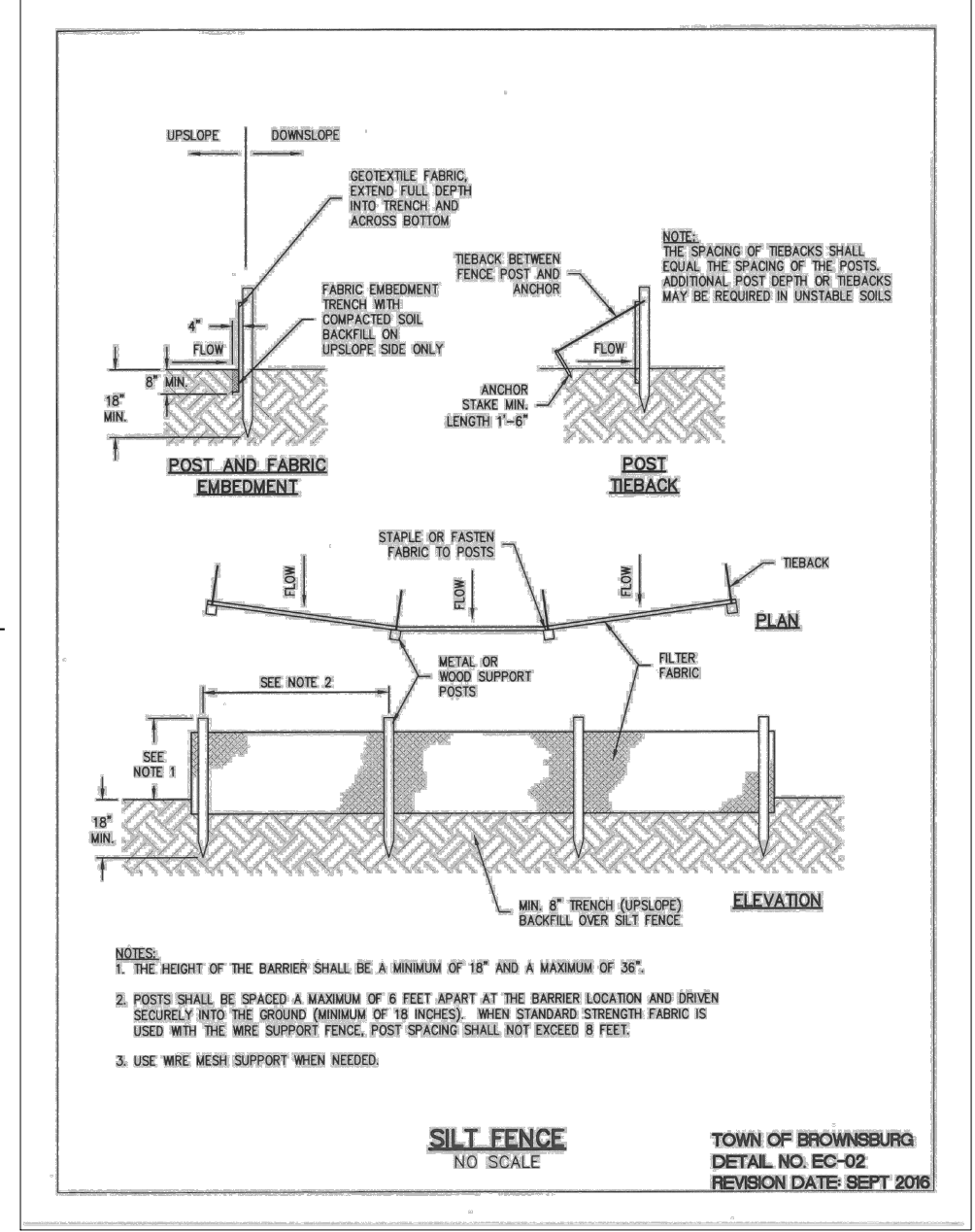
- INSPECT ROCK CHUTES AFTER STORM EVENTS FOR STONE DISPLACEMENT AND FOR EROSION AT THE SIDES AND ENDS OF THE APRON.
- MAKE NEEDED REPAIRS IMMEDIATELY; USE APPROPRIATE SIZE STONE; AND DO NOT PLACE THEM ABOVE FINISHED GRADE.

**COMMON CONCERNS:**

FOUNDATION NOT EXCAVATED DEEP ENOUGH OR WIDE ENOUGH--RIPRAP RESTRICTS THE FLOW CROSS SECTION, RESULTING IN EROSION AROUND THE APRON AND SCOUR HOLES AT THE OUTLET.  
RIPRAP APRON ON ZERO GRADE--

**RIP-RAP DETAIL** 7

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**SILT FENCE DETAIL** 3

NOT TO SCALE C502

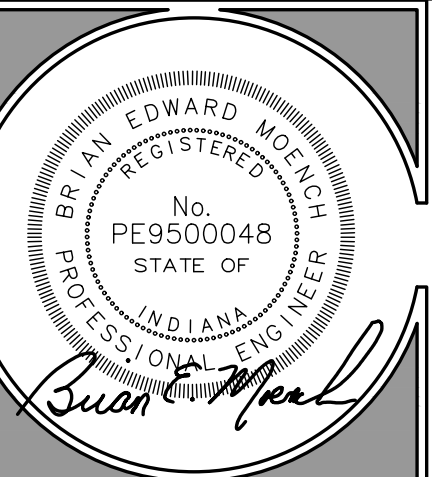


**Moench Engineering**  
 4000 Clarks Creek Road  
 Plainfield, Indiana 46168  
 (317) 837-2767  
 (317) 837-7266 (Fax)

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 4005 N CR 1000 E  
 BROWNSBURG, IN 46122

LANDSCAPE PLAN



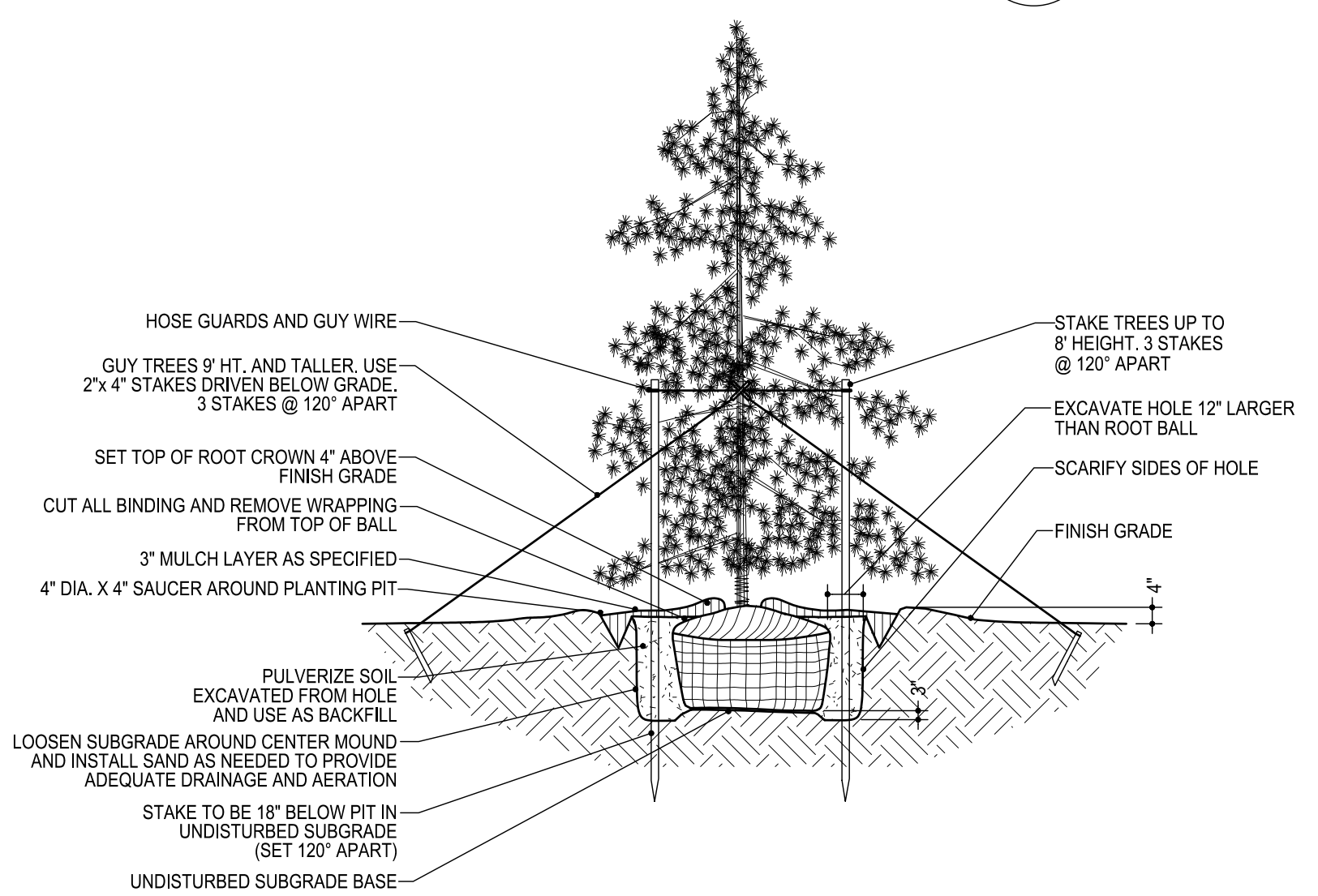
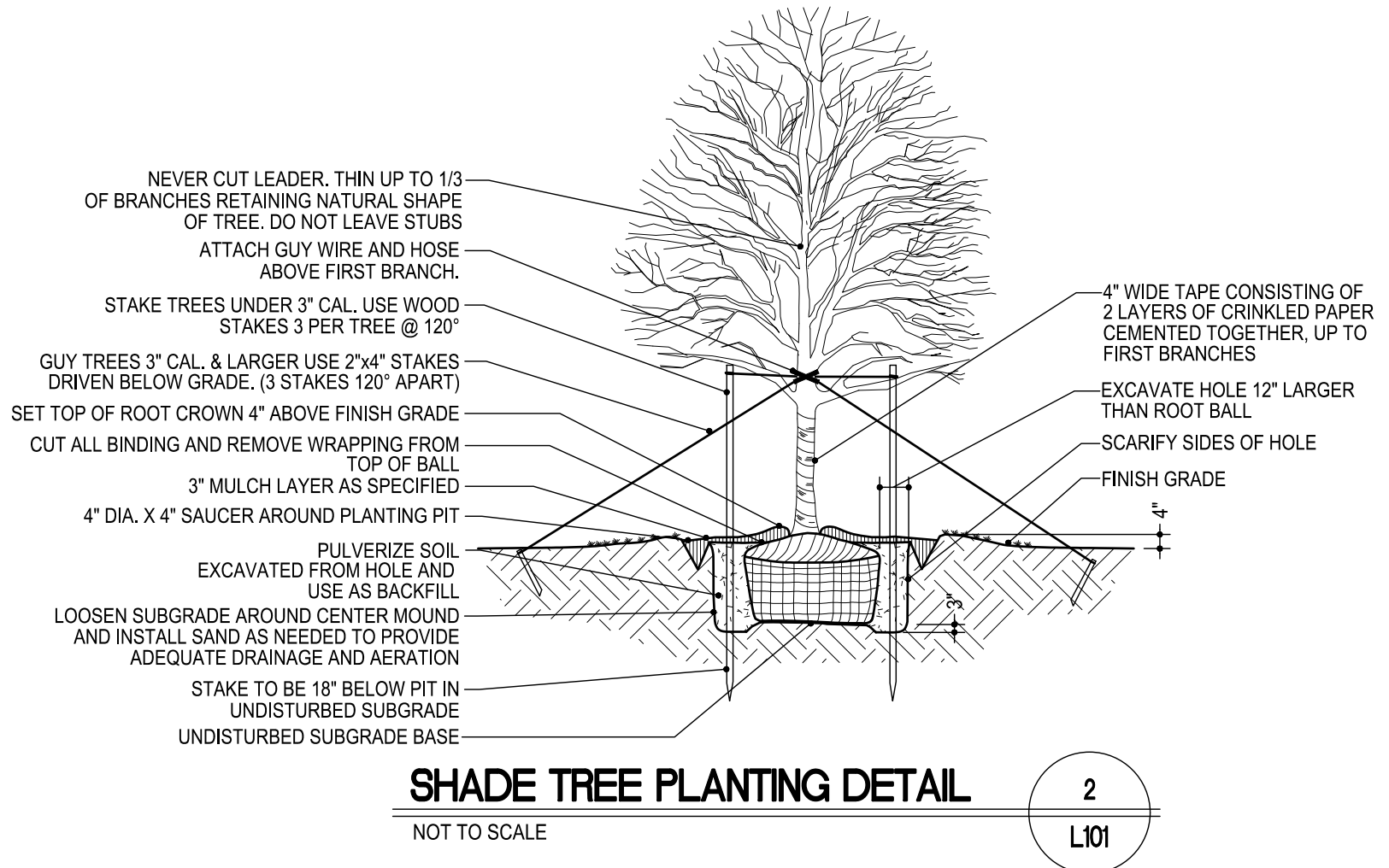
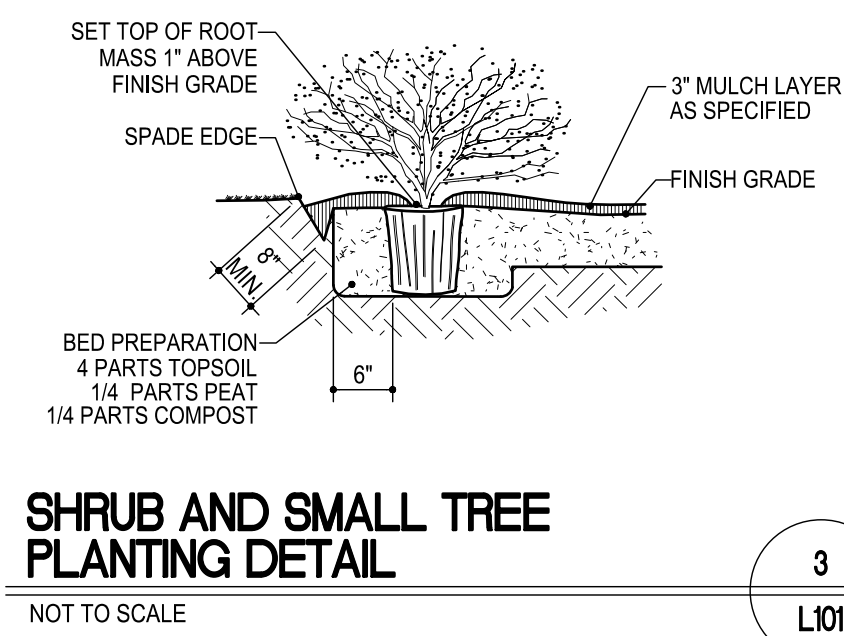
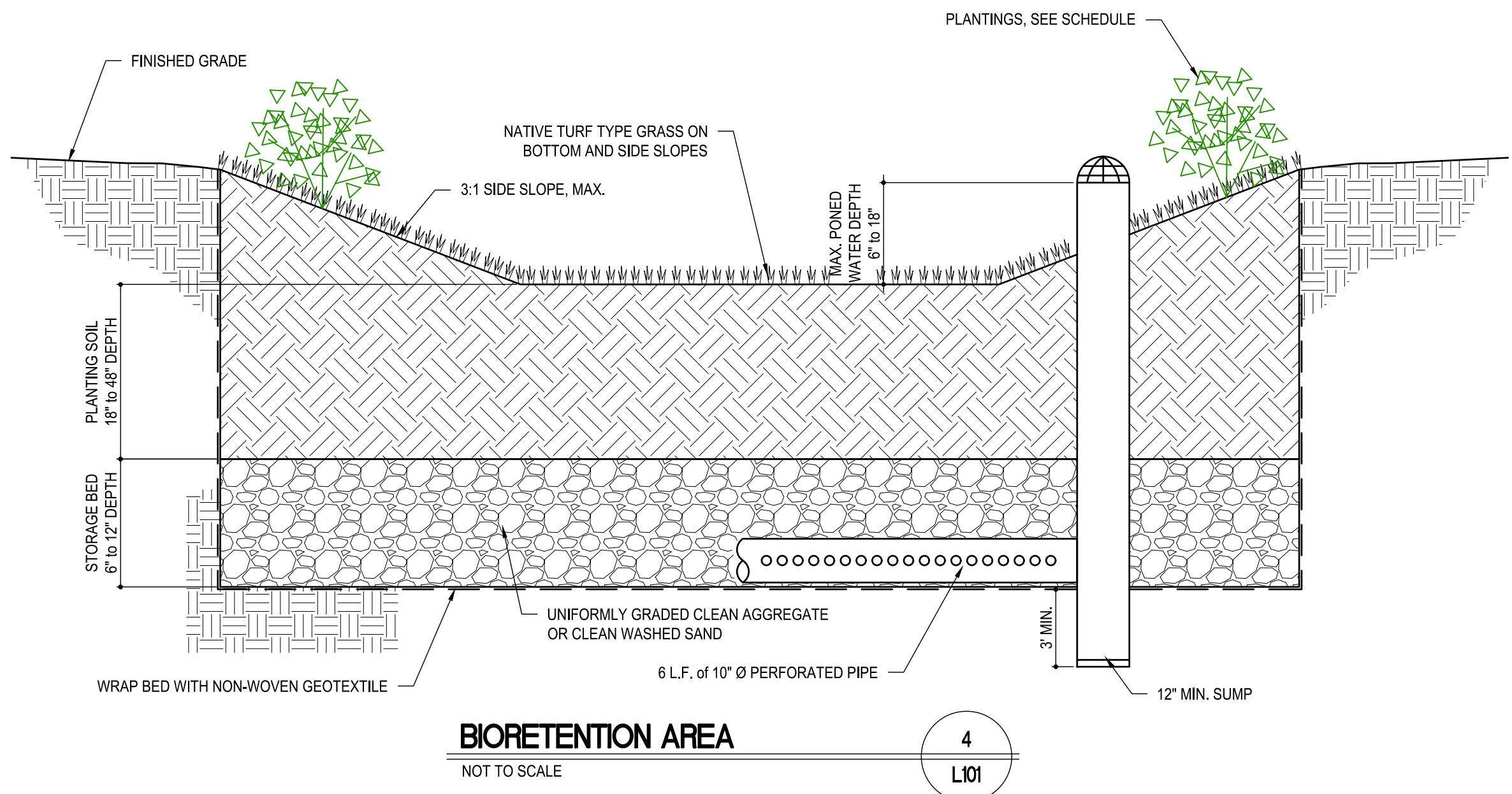
**REVISIONS:**

NO.	DESCRIPTION	DATE
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	11/22/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	Revised Storm Outlet	9/26/25

DRAWN BY: JBF  
 CHECKED BY: BEM  
 PROJECT NUMBER: 21346  
 DATE: 1/13/22

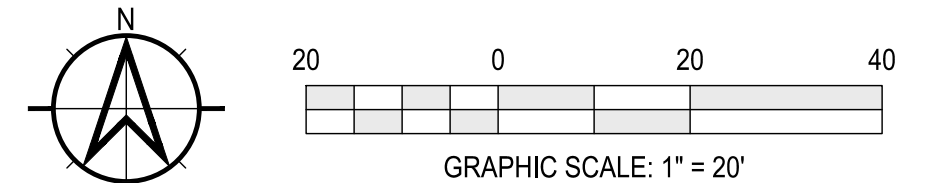
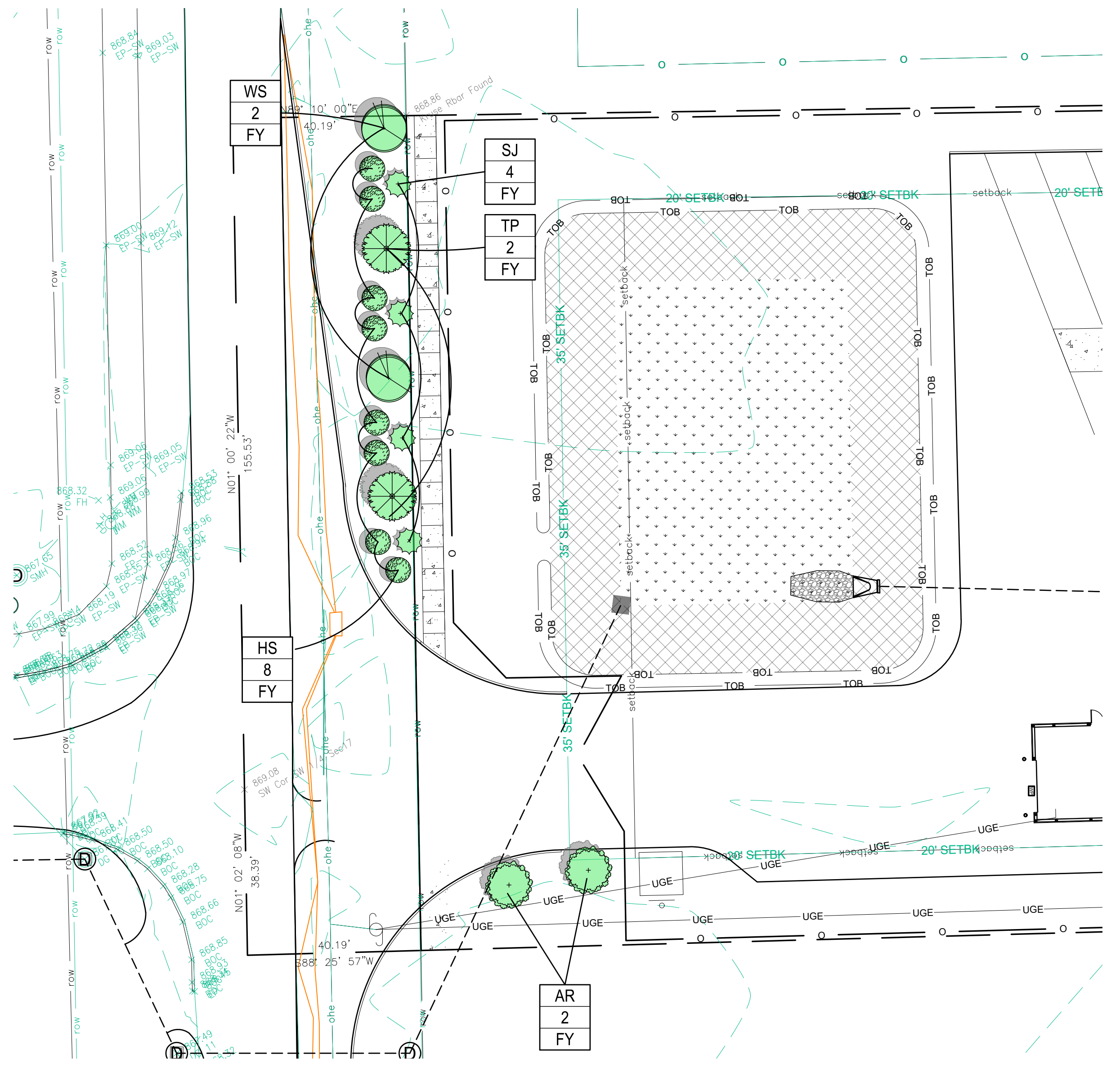
SHEET NUMBER:

**L101**



PLANTING SCHEDULE								
LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE COND	REMARKS	HEIGHT SPREAD	QTY REQD
	WS	2	<i>Wisteria sinensis</i>	Blue Chinese Wisteria Tree	#1 Container	Ornamental Deciduous	10-15 ft 10-12 ft	1.25
	AR	2	<i>Acer Rubrum</i>	Red / Sugar Maple	#5 Container	Canopy Deciduous	40-50 ft 30-40 ft	2
	TP	2	<i>Thuja plicata x standishii</i>	Thuja Green Giant	24" height	EVERGREEN	30-40 ft 8-10 ft	1.5
	HS	8	<i>Hibiscus syriacus</i> 'Red Heart' <i>Hibiscus syriacus</i> 'Notawooden' <i>Hibiscus syriacus</i> 'JWNWOOD4'	Red Heart Rose of Sharon Lavender Chiffon Rose of Sharon Pink Chiffon Rose of Sharon	#3 Container	DECIDUOUS SHRUB	8-12 ft 6-10 ft	10
	SJ	4	<i>Spiraea nipponica</i> 'Snowmound' <i>Spiraea Japonica</i> 'Neon Flash' <i>Spiraea Japonica</i> 'Matgold'	Snowmound Spirea Neon Flash Spirea Rainbow Fizz Spirea	#1 container	DECIDUOUS SHRUB	2-7 ft 3-7 ft	

NOTE: Plants to be spaced at 10' o.c. to promote growth height of 30-40 feet.  
 NOTE: Assorted mix of Hibiscus Plants in each grouping.  
 NOTE: Assorted mix of Spirea Plants in each grouping.



**LITHONIA LIGHTING**

**EU2L Low Profile Emergency Light**

**FEATURES & SPECIFICATIONS**

**WARRANTY:** - 5 year limited warranty. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase.

**CONSTRUCTION:** - The housing is made of die-cast aluminum. The housing is made of die-cast aluminum. The housing is made of die-cast aluminum.

**OPTICS:** - The light is emitted from a single LED chip. The light is emitted from a single LED chip. The light is emitted from a single LED chip.

**INSTALLATION:** - Mount on a wall or ceiling. Mount on a wall or ceiling. Mount on a wall or ceiling.

**OPERATION:** - The light is controlled by a photocell. The light is controlled by a photocell. The light is controlled by a photocell.

**TESTING:** - The light is tested to meet the requirements of the National Electrical Code. The light is tested to meet the requirements of the National Electrical Code. The light is tested to meet the requirements of the National Electrical Code.

**COMPLIANCE:** - The light is compliant with the requirements of the National Electrical Code. The light is compliant with the requirements of the National Electrical Code. The light is compliant with the requirements of the National Electrical Code.

**ENVIRONMENTAL:** - The light is designed to operate in a wide range of temperatures. The light is designed to operate in a wide range of temperatures. The light is designed to operate in a wide range of temperatures.

**RECYCLE:** - The light is made from recycled materials. The light is made from recycled materials. The light is made from recycled materials.

**SPACING GUIDELINES**

**Mounting Height**

**Spacing**

**Application Rate**

**Example of single LED luminaire**

**Example of single LED luminaire**

**LITHONIA LIGHTING**

**CS CONTRACTOR SELECT**

**LITHONIA LIGHTING**

**Contractor Select™ OLWP LED Wall Pack**

**FEATURES:**

- Available in 120/277-Volt LED White
- Available in 120/277-Volt LED White
- Available in 120/277-Volt LED White

**Specifications**

**Dimensions**

**WARRANTY:** - 5 year limited warranty. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase. Lithonia Lighting warrants the LED lighting system for 5 years from the date of purchase.

**CONSTRUCTION:** - The housing is made of die-cast aluminum. The housing is made of die-cast aluminum. The housing is made of die-cast aluminum.

**OPTICS:** - The light is emitted from a single LED chip. The light is emitted from a single LED chip. The light is emitted from a single LED chip.

**INSTALLATION:** - Mount on a wall or ceiling. Mount on a wall or ceiling. Mount on a wall or ceiling.

**OPERATION:** - The light is controlled by a photocell. The light is controlled by a photocell. The light is controlled by a photocell.

**TESTING:** - The light is tested to meet the requirements of the National Electrical Code. The light is tested to meet the requirements of the National Electrical Code. The light is tested to meet the requirements of the National Electrical Code.

**COMPLIANCE:** - The light is compliant with the requirements of the National Electrical Code. The light is compliant with the requirements of the National Electrical Code. The light is compliant with the requirements of the National Electrical Code.

**ENVIRONMENTAL:** - The light is designed to operate in a wide range of temperatures. The light is designed to operate in a wide range of temperatures. The light is designed to operate in a wide range of temperatures.

**RECYCLE:** - The light is made from recycled materials. The light is made from recycled materials. The light is made from recycled materials.

**CS CONTRACTOR SELECT**

**LUMINAIRE SCHEDULE**

SYMBOL	QTY.	LABEL	ARRANGEMENT	DESCRIPTION	MOUNTING HEIGHT	LUX	WATTS
	3	A	SINGLE	LITHONIA RADB LED - P1	41.50 INCHES	34.5	5
	2	B	SINGLE	LITHONIA OLWP LED SWW2 120 PE DDB	16 FEET	160	18.5
	2	B	SINGLE	LITHONIA EU2L	7.5 FEET	10.76	.33 (LED)

**LIGHTING LEGEND**

- 60 LUX
- 30 LUX
- 20 LUX
- 5 LUX
- 1 LUX

**Moench Engineering**

4000 Clarks Creek Road  
Plainfield, Indiana 46168  
(317) 837-2767  
(317) 837-7266 (Fax)

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**LIONS TRANS INC. (BROWNSBURG)**

4005 N CR 1000 E  
BROWNSBURG, IN 46122

**SITE LIGHTING PLAN**

**REGISTERED PROFESSIONAL ENGINEER**

BRIAN EDWARD MOENCH

No. PE9500048

STATE OF INDIANA

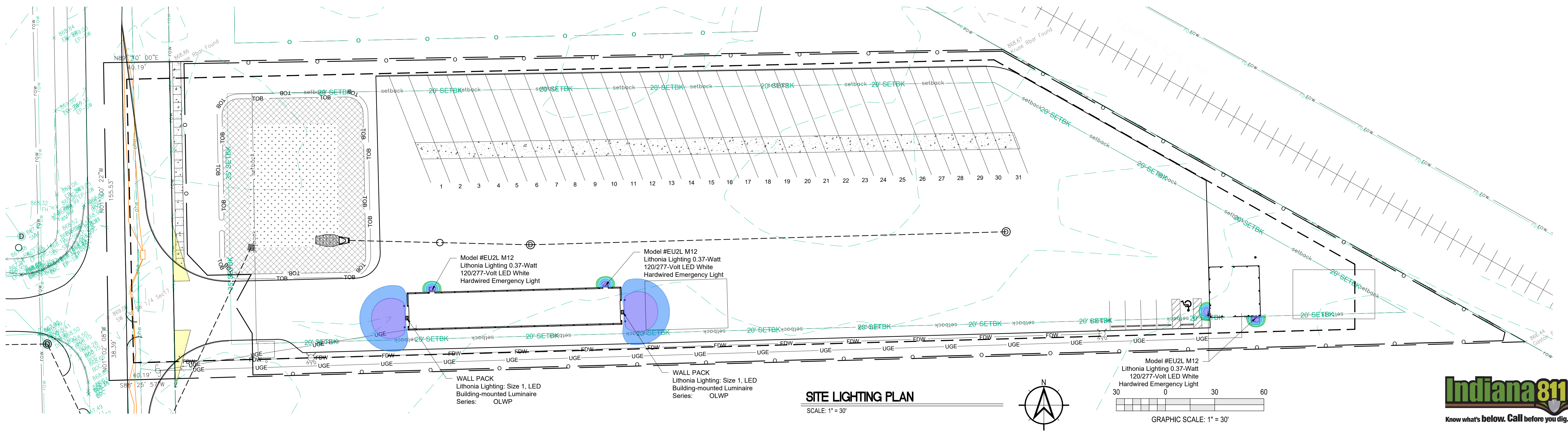
*Brian Moench*

**REVISIONS:**

NO.	DESCRIPTION	DATE
0	SUBMITTED FOR REVIEW	11/5/21
1	REVISED PER ISDH COMMENTS	12/3/21
2	REVISED TO ABOVE GROUND STORAGE	1/12/22
3	REVISED PER TOWN COMMENTS	9/09/24
4	REVISED PER TOWN COMMENTS	12/11/24
5	REVISED STORM OUTLET	9/26/25

DRAWN BY: JBF  
CHECKED BY: BEM  
PROJECT NUMBER: 21346  
DATE: 1/13/22  
SHEET NUMBER:

**LT101**



**Indiana 811**

Know what's below. Call before you dig.