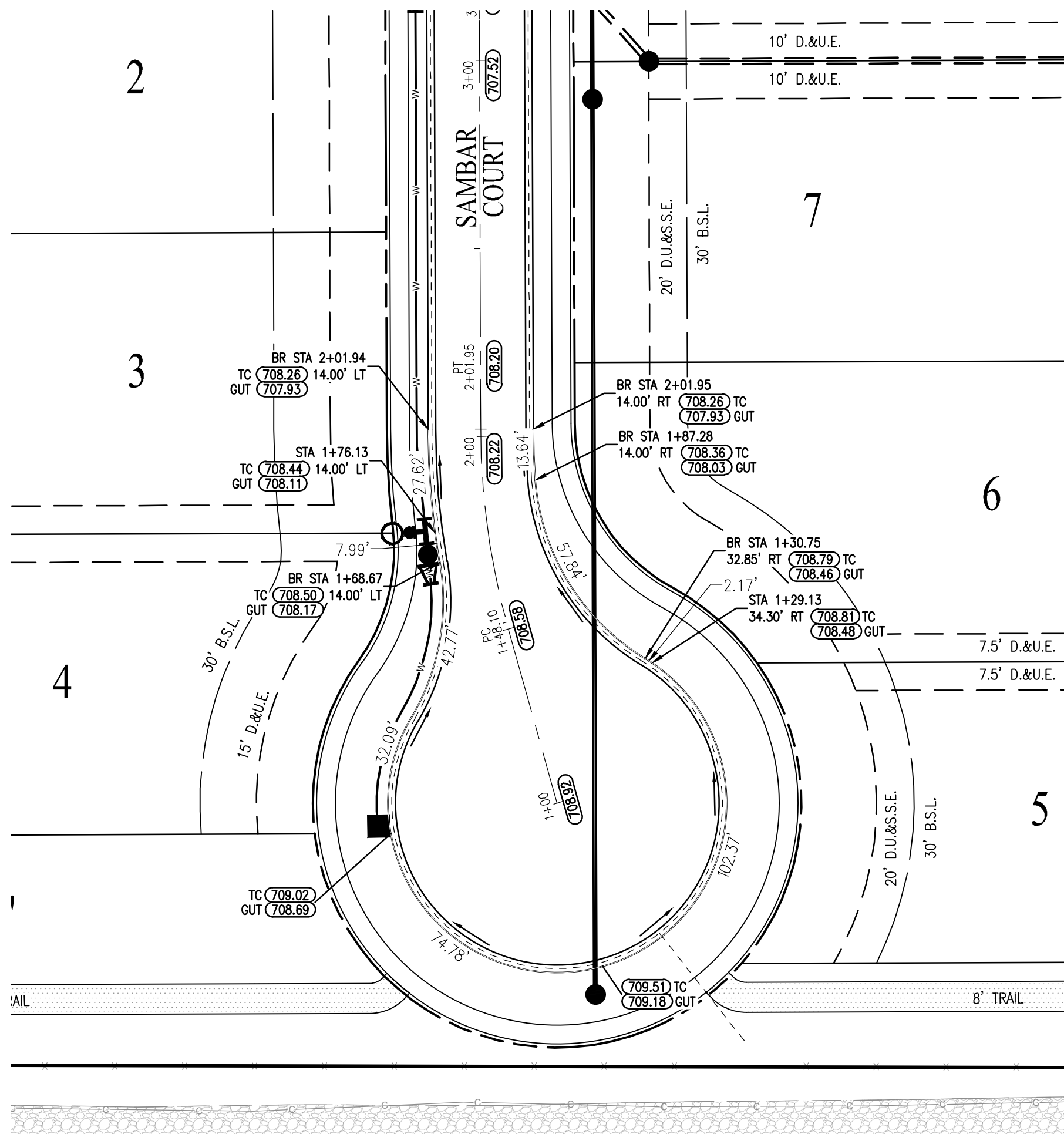


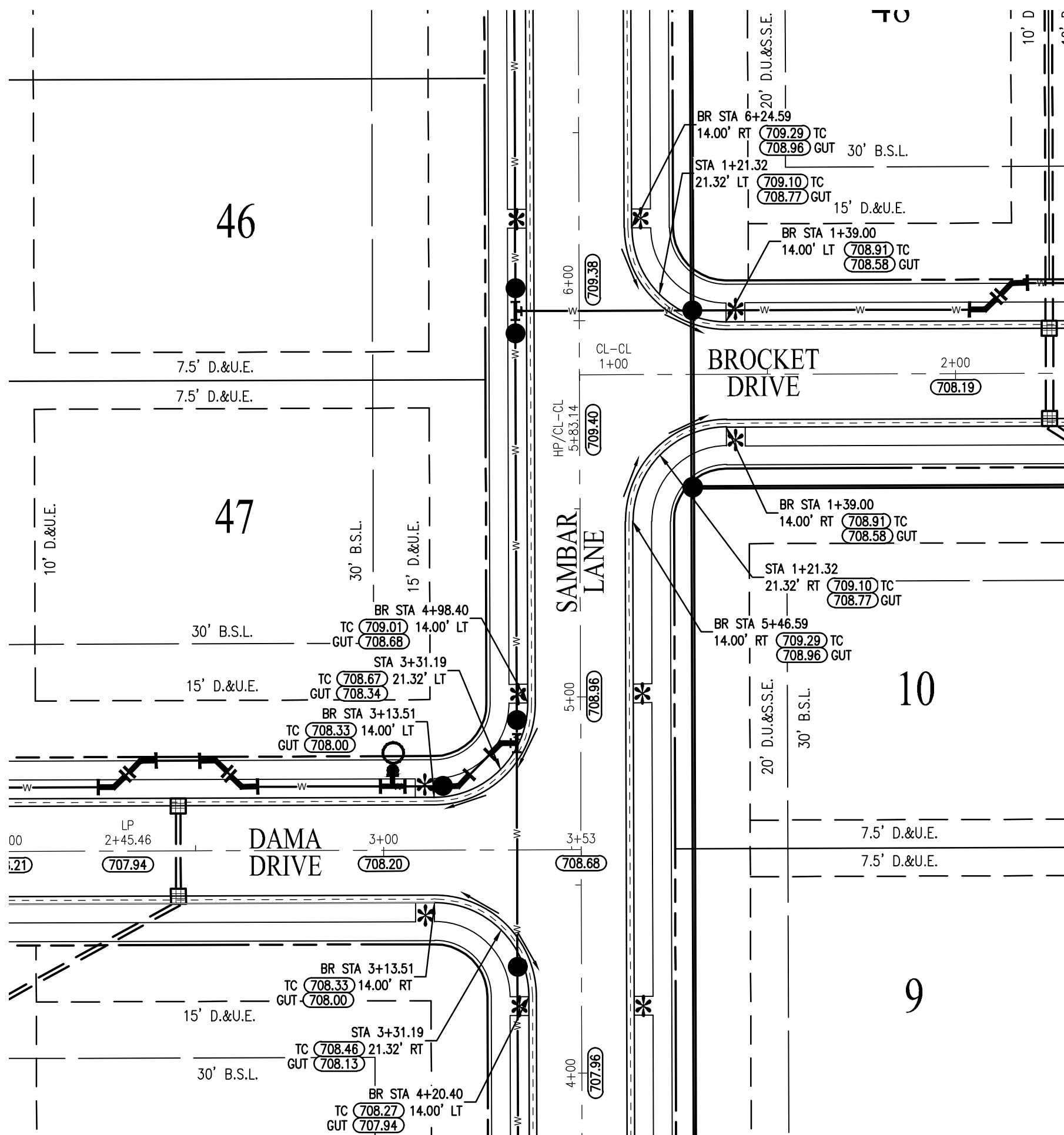
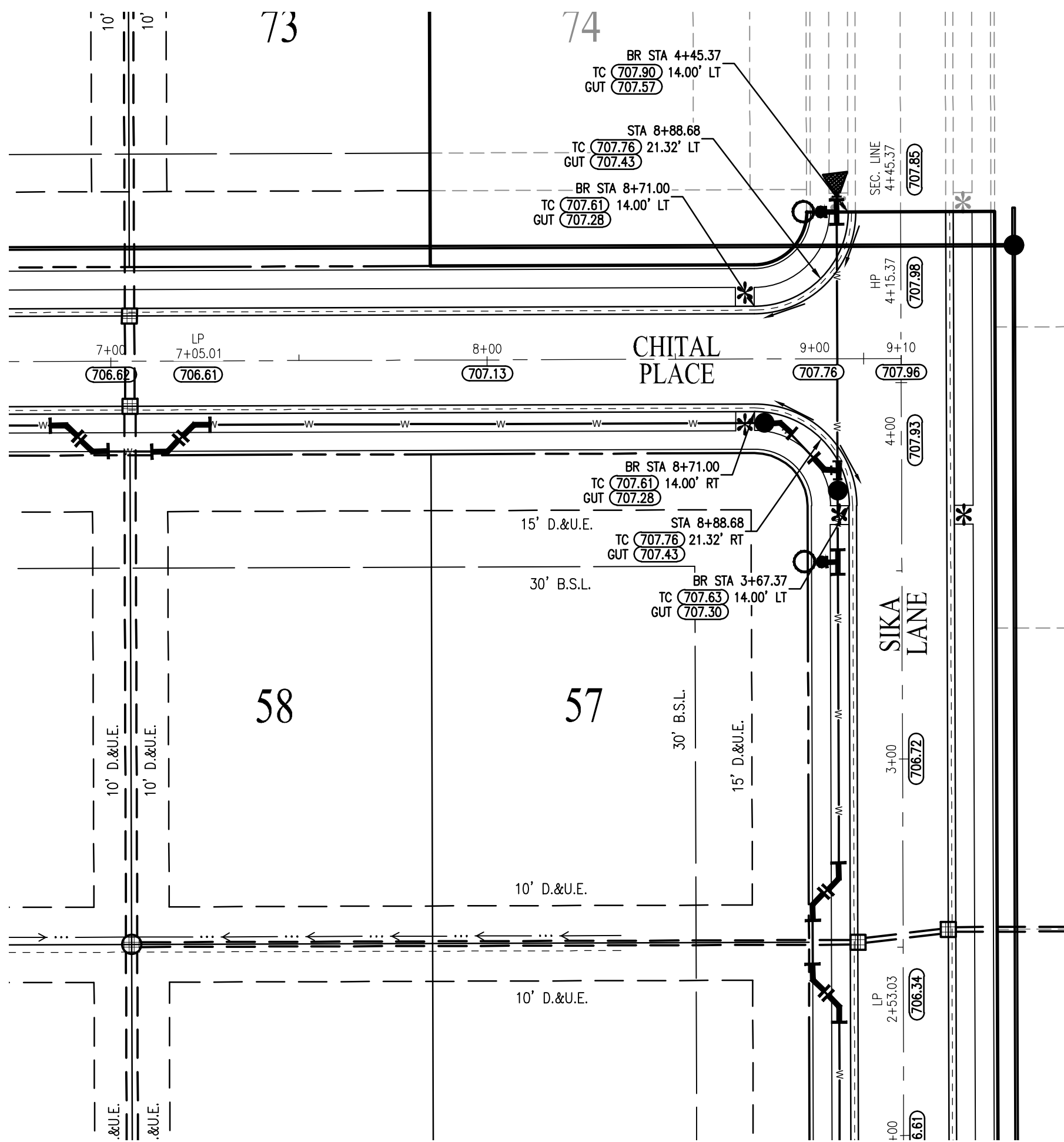


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PLOTTER: HP - ePlot



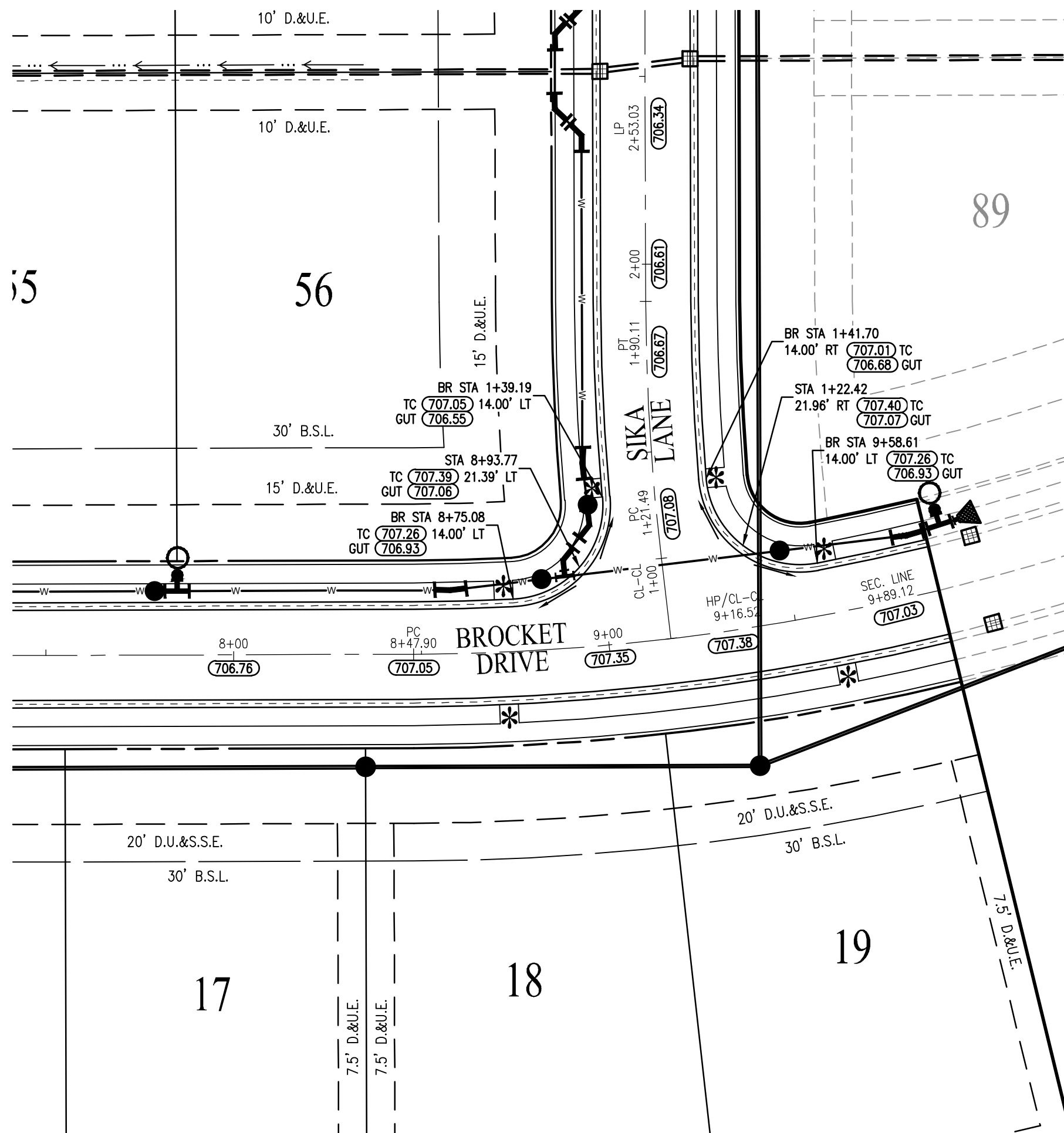
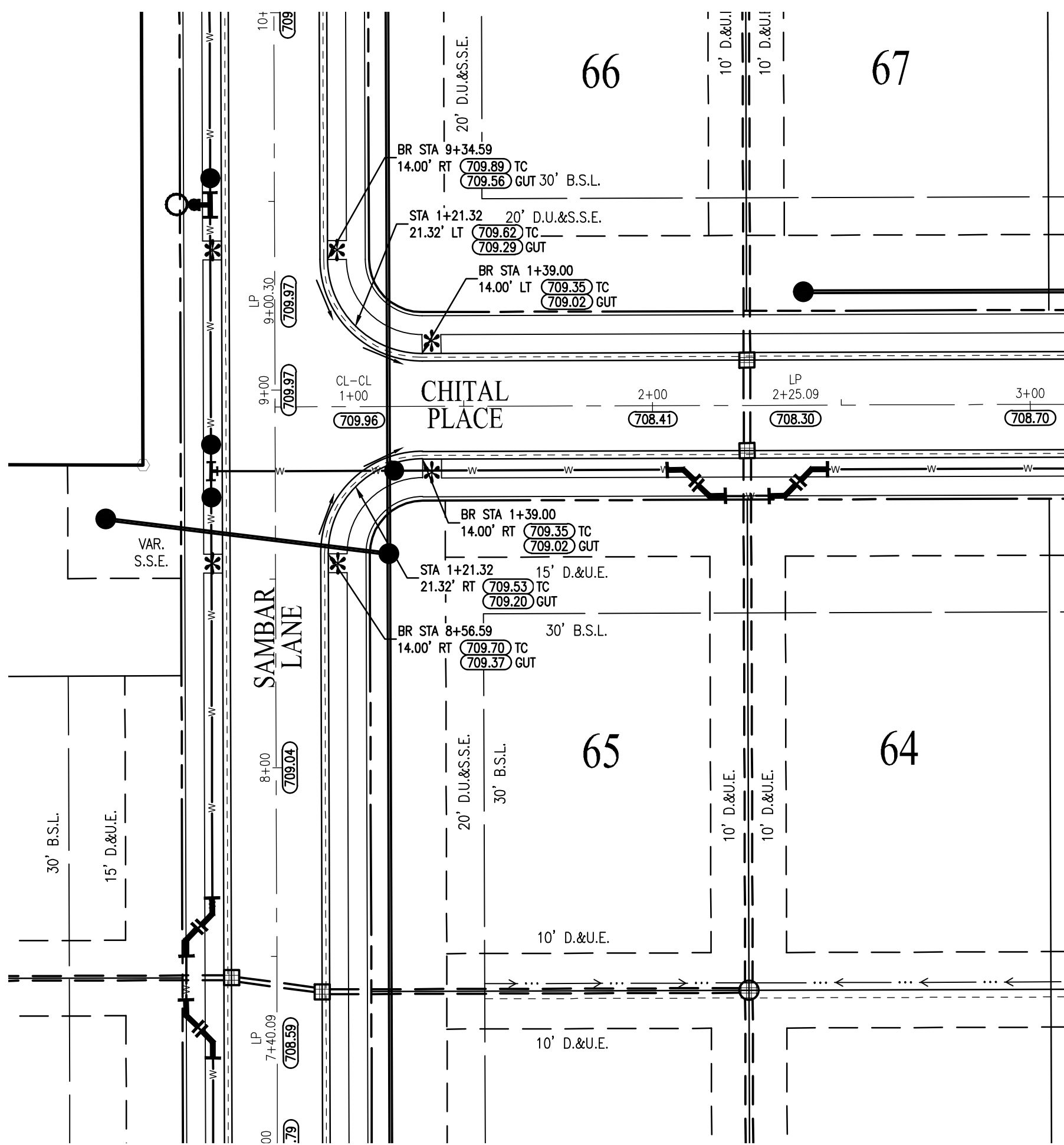
CUL-DE-SAC DETAIL
SAMBAR COURT

INTERSECTION DETAIL
SIKA LANE & CHITAL PLACE



INTERSECTION DETAIL
DAMA DRIVE & BROCKET DRIVE & SAMBAR LANE

INTERSECTION DETAIL
SAMBAR LANE & CHITAL PLACE



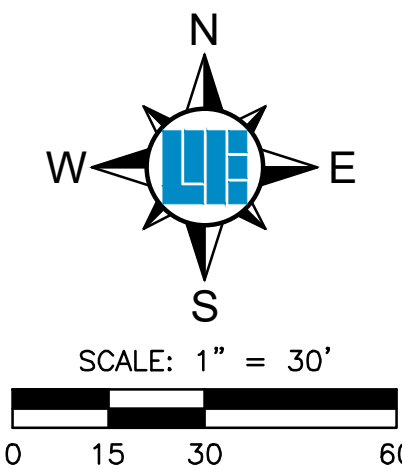
INTERSECTION DETAIL
BROCKET DRIVE & SIKA LANE

LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- SWALE
- SSD
- PROPOSED SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- STORM BEEHIVE INLET
- STORM INLET
- TOP OF CASTING
- INVERT
- REINFORCED CONCRETE PIPE
- MANHOLE
- STRUCTURE
- DRAINAGE EASEMENT
- DRAINAGE UTILITY AND SANITARY SEWER EASEMENT
- DRAINAGE, UTILITY AND SEWER EASEMENT
- CONCRETE END SECTION
- MATCH EXISTING
- TYPICAL
- PROPOSED
- EXISTING
- RADIUS
- VARIABLE WIDTH
- RIGHT-OF-WAY
- BACK OF CURB
- PAD (TYP. PAD SIZE 60X70)
- B.S.L. = BUILDING SETBACK LINE
- ADA RAMP
- FIRE HYDRANT

NOTES

- STANDARD SPECIFICATIONS BY THE LOCAL HIGHWAY DEPARTMENT, LATEST EDITION, SHALL APPLY TO THIS PROJECT FOR ALL STREET IMPROVEMENTS.
- ALL STREETS TO BE 28' IN WIDTH (MEASURED FROM B-B OF CURB) UNLESS OTHERWISE NOTED.
- ALL RIGHTS-OF-WAY TO BE 50' IN WIDTH UNLESS OTHERWISE NOTED.
- ALL CURB RADI AT INTERSECTIONS ARE 25' TO BACK OF CURB UNLESS OTHERWISE NOTED.
- TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
- SEE SECONDARY PLAT FOR STREET CENTERLINE GEOMETRY, EASEMENT LOCATIONS AND DESIGNATIONS.



LENNAR

DEERFIELD SECTION 1

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

INTERSECTION DETAIL

SHEET NO.

C403

PROJECT NO.

W21.0353

REVISIONS AND ISSUES

BY

DATE

APPROVAL PENDING NOT FOR CONSTRUCTION

APPROVAL PENDING NOT FOR CONSTRUCTION

PROJECT NO: W21.0353

DWG NAME: C403 Intersection Detail

DESIGNED BY: SCS

DRAWN BY: MEN

CHECKED BY: JP

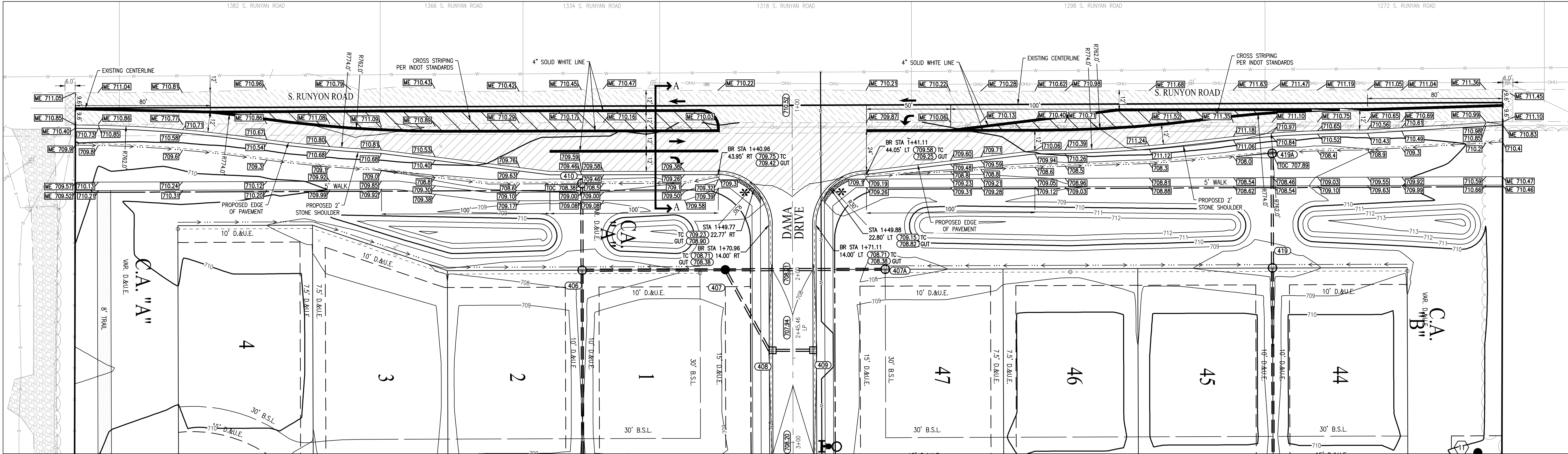
DATE: 05-03-2022

10505 N. College Avenue
Indianapolis, Indiana 46280
weihh.net
317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

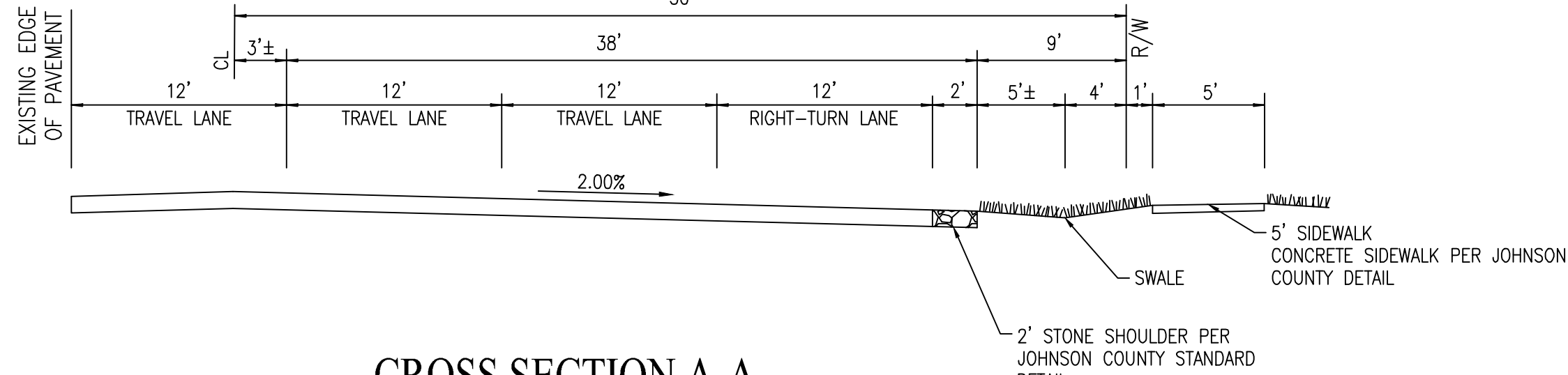
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ENGINEERS

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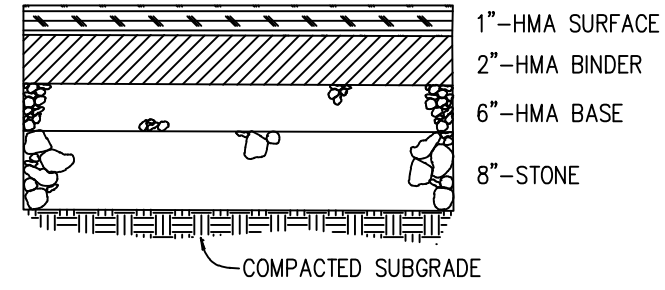
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DATE: 08/16/2022 10:00:00
PLOT: 08/16/2022 10:00:00
PLOTTER: HP DesignJet 5000



ENTRANCE PLAN
S. RUNYON ROAD & DAMA DRIVE



CROSS SECTION A-A
(NO SCALE)



ARTERIAL PAVEMENT SECTION
WITHIN RUNYON ROAD R/W (NO SCALE)

LEGEND

- MILL AND RESURFACE PER JOHNSON COUNTY REQUIREMENTS
- TRANSITION MILL AND RESURFACE (6' MIN.) PER JOHNSON COUNTY REQUIREMENTS
- NEW PAVEMENT TO BE INSTALLED PER JOHNSON COUNTY REQUIREMENTS
- TYPICAL PAVEMENT SECTION - MINOR ARTERIAL

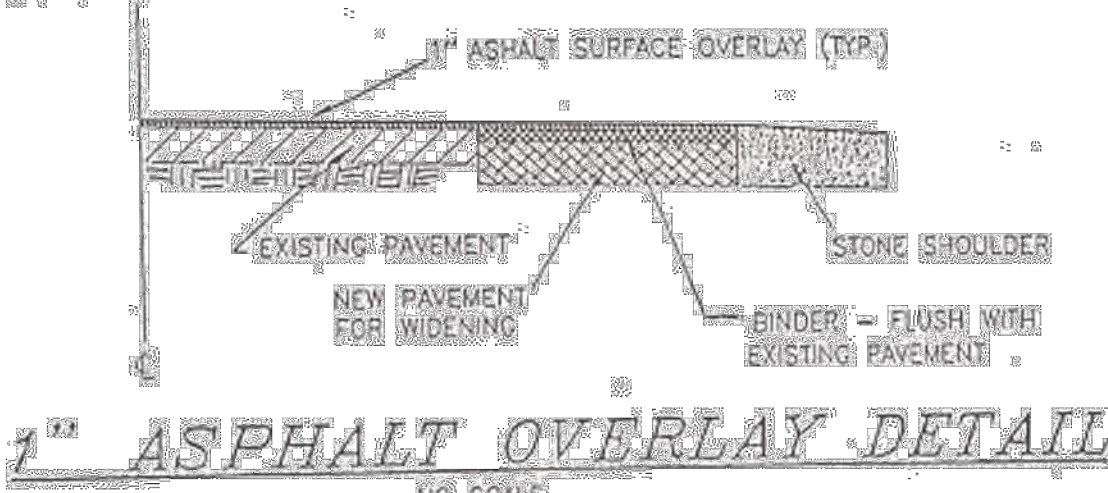
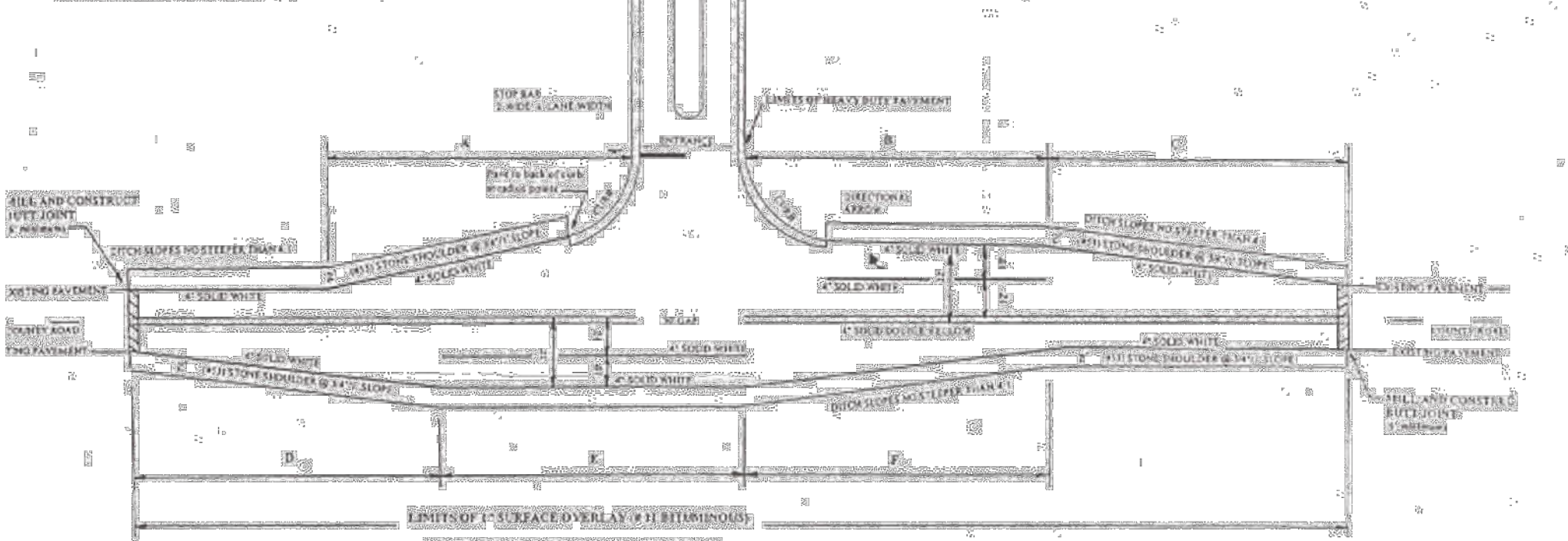
LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- SWALE
- PROPOSED SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- STORM INLET
- TOP OF CASTING
- INVERT
- RENFORCED CONCRETE PIPE
- MANHOLE
- STRUCTURE
- DRAINAGE EASEMENT
- DRAINAGE, UTILITY AND SANITARY SEWER EASEMENT
- DRAINAGE, UTILITY AND SEWER EASEMENT
- CONCRETE END SECTION
- MATCH EXISTING
- TYPICAL
- PROPOSED
- EXISTING
- RADIUS
- VARIABLE WIDTH
- RIGHT-OF-WAY
- BACK OF CURB
- PAD (TYP. PAD SIZE 60'X70')
- B.S.L. = BUILDING SETBACK LINE
- ADA RAMP
- FIRE HYDRANT

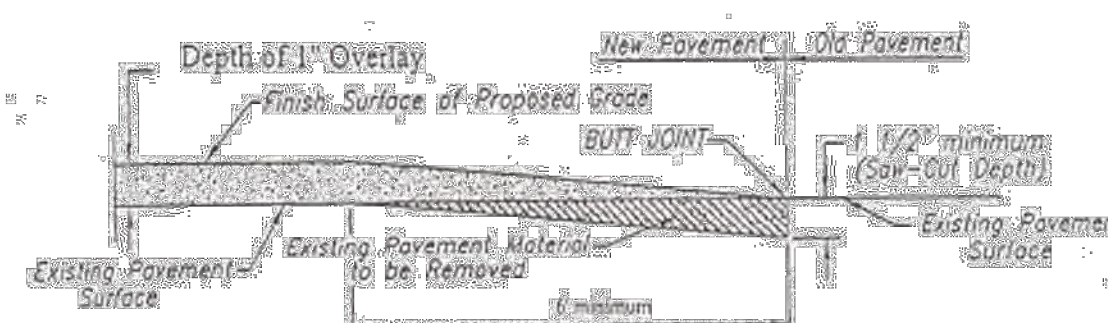
ACCELERATION, DECELERATION AND PASSING BLISTER

STREET CLASSIFICATION	MAJOR COLLECTOR	MINOR COLLECTOR	LOCAL ROAD
A	100'	75'	50'
B	75'	50'	35'
C	50'	35'	25'
D	35'	25'	15'
E	25'	15'	10'
F	15'	10'	5'

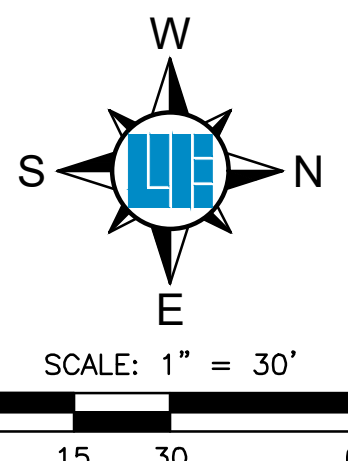
Notes: 1. Minimum clear width of 10' for all streets. 2. Minimum clear width of 10' for all streets. 3. Minimum clear width of 10' for all streets.



ASPHALT OVERLAY DETAIL
(NO SCALE)



CROSS SECTION OF BUTT JOINT DETAIL
(To be milled at each end of pavement overlay)



LENNAR

DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

ENTRANCE DETAIL

SHEET NO. **C404**

PROJECT NO. W21.0353

WEIHE ENGINEERS

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Landscape Architecture

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax

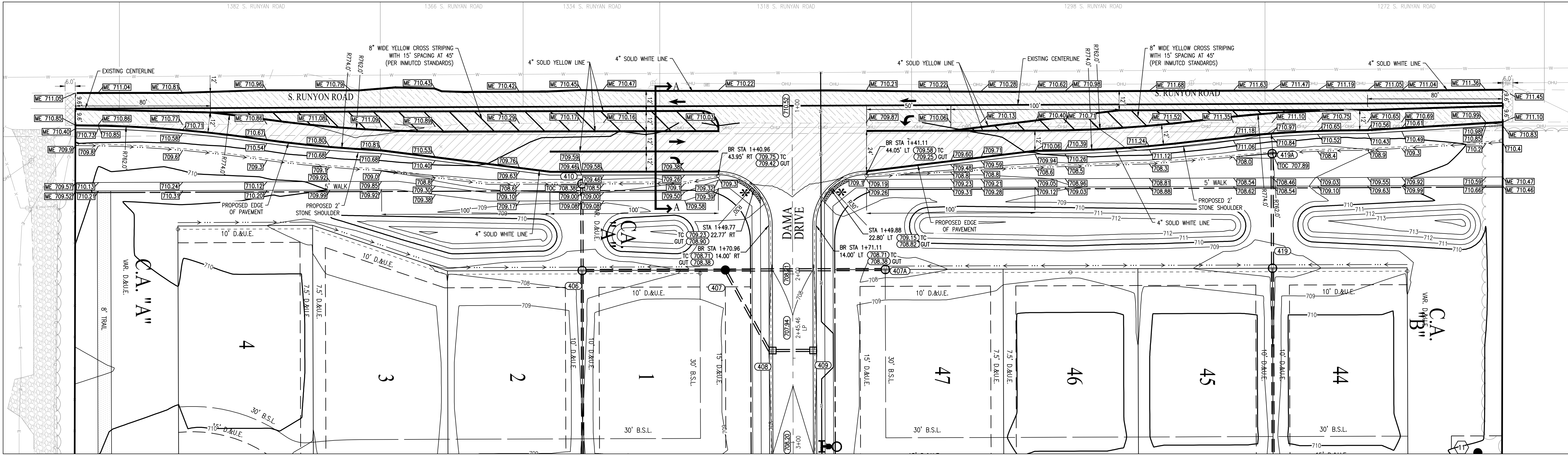
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

PROJECT NO: W21.0353
DWG NAME: C404 Entrance Detail
DESIGNED BY: JCS
DRAWN BY: MEN
CHECKED BY: JP
DATE: 08-03-2022

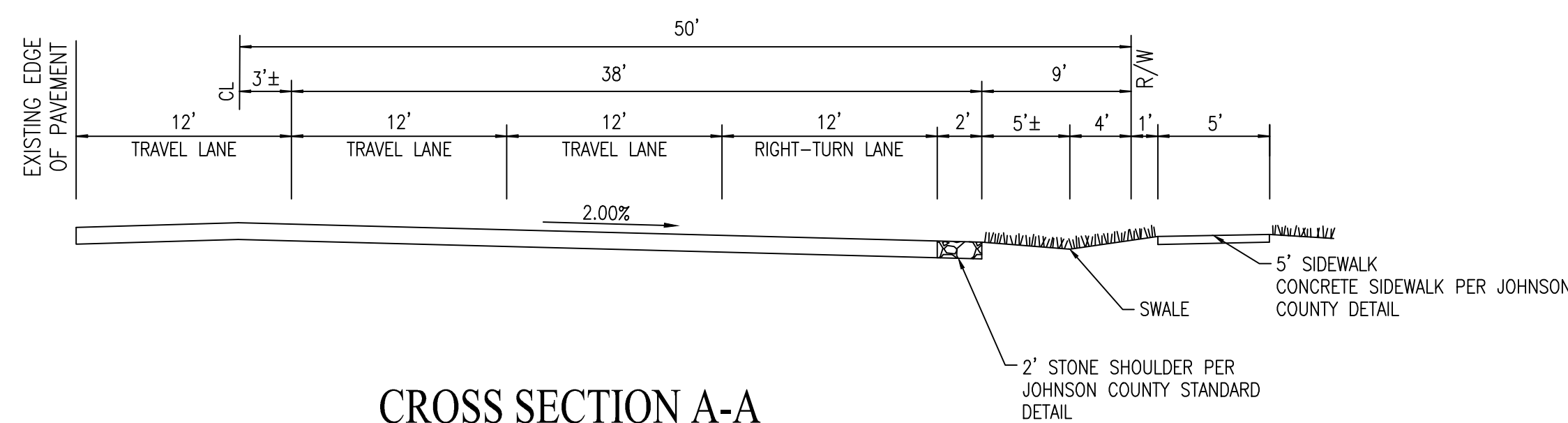
REVISIONS AND ISSUES

APPROVAL PENDING NOT FOR CONSTRUCTION

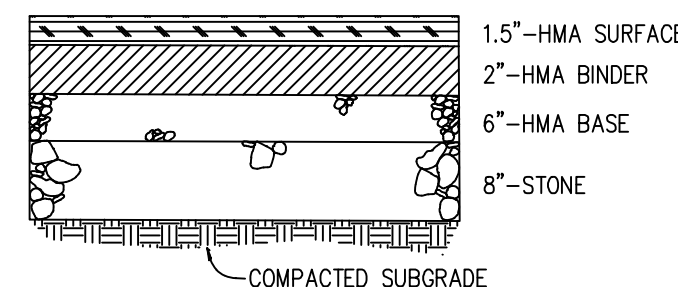
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DATE PLOTTED: 12/12/2021 10:00 AM
PLOTTER: HP DesignJet T1200



ENTRANCE PLAN
S. RUNYON ROAD & DAMA DRIVE



CROSS SECTION A-A
(NO SCALE)



ARTERIAL PAVEMENT SECTION
WITHIN RUNYON ROAD R/W (NO SCALE)

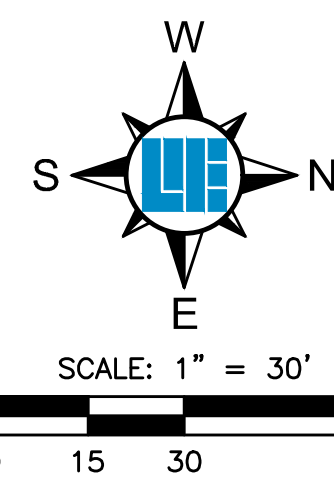
LEGEND

- MILL AND RESURFACE PER JOHNSON COUNTY REQUIREMENTS
- TRANSITION MILL AND RESURFACE (6' MIN.) PER JOHNSON COUNTY REQUIREMENTS
- NEW PAVEMENT TO BE INSTALLED PER JOHNSON COUNTY REQUIREMENTS. TYPICAL PAVEMENT SECTION - MINOR ARTERIAL

LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- SWALE
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- PROPOSED SANITARY SEWER LINE
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- BACK OF CURB
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- B.S.L. = BUILDING SETBACK LINE
- ADA RAMP
- FIRE HYDRANT

* ALL PAVEMENT STRIPING TO BE THERMOPLASTIC



Within Indiana Call
811 or 800-382-5544
24 Hours a Day, 7 Days a Week
PER INDIANA STATE LAW IC 8-1-26,
IT IS AGAINST THE LAW TO EXCAVATE
WITHOUT NOTIFYING THE UNDERGROUND
LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.

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REVISIONS AND ISSUES	DATE	BY	PROJECT NO.	W21.0353
APPROVAL PENDING NOT FOR CONSTRUCTION			DWG NAME:	C404 Entrance Detail
			DESIGNED BY:	SSS
			DRAWN BY:	SSS
			CHECKED BY:	SSS
			DATE:	05-03-2022

APPROVAL PENDING NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
ENTRANCE DETAIL
SHEET NO. **C404**
PROJECT NO. W21.0353

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

LOCATION: J:\2021\W21.0353\Section 10\Engineering\design\council\C405 Sheet Details.dwg
DATE/TIME: August 18, 2022 - 12:12pm
PLOT/ED BY: allison

Subdivision Control Ordinance

SECTION 6-102-5. IMPROVEMENTS AND INSTALLATIONS

A. GENERAL

- Subdivision improvements shall be designed, furnished, and installed in accordance with requirements herein and other applicable criteria. Whenever requirements of any other governmental unit are higher or more restrictive than this Ordinance, those requirements shall control any application for plat approval.
- Prior to final approval of a plat and any construction in a subdivision, the subdivider shall submit copies of the erosion control plan and construction drawings for street drainage facilities and all other required improvements to the Board of Commissioners at least thirty (30) days before construction begins. Construction drawings for the sanitary sewer system shall also be submitted to the Johnson County Board of Health, Indiana State Board of Health, Indiana Department of Environmental Management, and such other State agencies as may be appropriate, at least sixty (60) days before construction begins.
- All construction within the County road/street right-of-way shall require a permit and a bond through the County Highway Department.
- All culverts and bridges to be incorporated into the County road system shall conform to the current requirements of the Johnson County Bridge and Culvert Acceptance Policy.
- Inspection of construction of all required improvements shall be under the direction of the Board of Commissioners. The subdivider shall sign an agreement for Inspection and Testing Services with the County, as prescribed in the Appendix, Forms 12 and 13.

B. STREETS

Improvements for streets shall be performed to meet the following minimum standards and requirements:

1. Pavement Construction

- The County Planning Engineer shall be notified at least twenty-four (24) hours in advance of subgrade work, placement of stone base, concrete paving, or asphalt paving, but work may proceed if the County Engineer fails to inspect within seventy-two (72) hours of notification.
- The Director shall, when necessary and prudent, and at the developer=s expense, have core samples taken from the finished work to verify thickness and quality.
- Subgrade
 - Subgrade and proposed building areas, as shown on the approved plans, shall be graded to a smooth, true surface and to the required depth, and all soft and spongy places not affording a firm foundation will be dug out and refilled with

Johnson County Subdivision Ordinance 43 Adopted February 19, 2002

Subdivision Control Ordinance

- | | |
|--|---------|
| Residential developments | 25 feet |
| Commercial and industrial developments | 50 feet |
- Collector streets:

Width, with curb and gutter	32 feet*
Width, without curb and gutter	28 feet
Radius at intersections	
Residential developments	25 feet
Commercial and industrial developments	50 feet

*Measured back-to-back of curb
 - Landscape islands are encouraged for cul-de-sacs only in residential subdivisions. The maximum radius of such islands shall be ten (10) feet. Geometrics of cul-de-sacs with landscaping will be reviewed individually and may require a larger overall diameter than listed above.
 - At an intersection of a subdivision street, or commercial or industrial drive, with an existing street or road, the subdivider shall install deceleration, acceleration and passing lanes along an existing street in accordance with Figure 1, 'Acceleration, Deceleration, and Passing Blister,' located in the Appendix of this Ordinance.
 - All road work involving construction of passing blisters and/or accel/decel lanes shall require a one-inch (1") overlay of bituminous surface, which shall extend across the full width of the existing roadway as well as the new features. Limits of this work shall be the extreme ends of the tapers and/or blister. Butt joints shall be milled at the ends of the work to ensure a smooth transition.
 - The overlaid area shall be striped as shown on approved construction plans. Striping material shall be thermoplastic in accordance with Indiana Department of Transportation specifications. Pavement curing shall take place for thirty (30) days prior to placement of the striping. Temporary tape striping may be required, at the discretion of the County Highway Department, until the thermoplastic markings are placed.
 - Additional off-site rights-of-way may be required for construction of the passing blisters or the tapers. The right-of-way shall be obtained and dedicated prior to the approval of County Highway Department permits.
 - Stone or asphalt shoulders shall be required adjacent to all passing blisters, tapers, and turn lanes. Stone shoulders shall be compacted #53 stone with a minimum thickness of six inches (6"). Both stone and asphalt compositions shall be placed flush with the new finished pavement, shall have a cross slope of six percent (6%) or three-quarters of an inch (3/4") per foot, and have a

Johnson County Subdivision Ordinance 47 Adopted February 19, 2002

Subdivision Control Ordinance

- compacted earth or stone. The entire area shall be so compacted as to meet a Proctor dry density of ninety-five percent (95%) or better. Stone backfill gradation shall have the approval of the County Planning Engineer. The subgrade shall be rolled with a roller weighing no less than ten (10) tons.
 - If dry, the subgrade shall be sprinkled or otherwise wetted prior to the time of laying the pavement. However, no pavement shall be laid on a muddy subgrade. The subgrade shall be maintained in a well-drained condition at all times during construction.
 - The subgrade condition must be approved by the County Planning Engineer or his representative before any concrete is placed. The final subgrade and stone base shall pass a proof roll test as directed by the County.
 - No stone base shall be placed until all utility road crossings are completed.
 - All utility road crossings shall be backfilled with No. 53 compacted aggregate stone, which shall be compacted so as to meet a Proctor dry density of ninety-five percent (95%) or better. Alternative backfill materials may be used upon approval by the County Planning Engineer.
 - If lime stabilization is required, the results of the soil tests used to determine the type and percent of lime used shall be submitted to the Planning Engineer for review and approval prior to placement. A two-inch (2") reduction in the required stone thickness may be allowed if approved by the County Planning Engineer.
- d. Concrete Street Pavement Standards
- Construction shall consist of reinforced or plain cement concrete laid as a pavement, in one course, on a 4" stone base and conforming with lines, grade, thicknesses, and cross-sections shown on plans or otherwise specified. The concrete shall reach a minimum four thousand (4000) P.S.I. compressive strength at twenty-eight (28) days.
 - Unless otherwise specified, concrete for pavement shall entrain five percent (5%) to seven percent (7%) air and shall conform to the Indiana Department of Transportation=s most recent specifications, Section 500.
 - The test for slump of concrete for reinforced concrete pavement shall be in accordance with ASTM C143-52, and for paving, the maximum slump shall be two inches (2"). In no case shall the water used, including any free water in the aggregate, exceed five and eight-tenths (5.8) gallons per bag (94 pounds) of cement used.
 - The two aggregates shall be proportioned to use the maximum amount of course aggregate to produce a workable mix. Fine aggregates shall not be less than thirty percent (30%) nor more than fifty percent (50%) of the total weight

Johnson County Subdivision Ordinance 44 Adopted February 19, 2002

Subdivision Control Ordinance

- minimum width of two (2) feet.
- At an intersection of two streets with different functional classifications (arterial, collector, local), any new pavement section within the right-of-way shall be composed of the structural material required for the street with the highest functional classification.
 - A graphical specification showing the proposed roadside ditch location and road widening for any adjacent street to a project is shown in Figure 2, 'Roadside Ditch Location and Road Widening Detail,' in the Appendix of this Ordinance.
3. Pavement Sections
- The minimum thickness of sub-base, base course, and pavement shall be as follows, unless otherwise allowed, in writing, by the County Planning Engineer:
- Local and cul-de-sac streets

A six-inch (6") plain concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade, or four inches (4") of hot asphaltic concrete pavement (one inch (1") of surface and three inches (3") of binder) on nine inches (9") of compacted crushed stone base on a compacted subgrade.
 - Collector streets

A seven-inch (7") plain concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade, or a seven-inch (7") hot asphaltic concrete pavement (one inch (1") of surface, two inches (2") of binder and four inches (4") of base) on eight inches (8") of compacted crushed stone base on compacted subgrade.
 - Arterial streets

An eight inch (8") reinforced concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade, or a nine-inch (9") hot asphaltic concrete pavement (one inch (1") of surface, two inches (2") of binder and six inches (6") of base) on eight inches (8") of compacted crushed stone base on a compacted subgrade.
 - Higher standards than indicated in this Section may be required by the Commission or the Board of Commissioners to accommodate extraordinary traffic volumes or other abnormal characteristics. All materials, mixtures, and workmanship shall conform to the Indiana Department of Transportation=s current specifications, except as modified by County Specifications.
4. Curbs and Gutters
- For all proposed major residential, commercial, and industrial subdivisions, the subdivider shall provide curbs and gutters. Curbs and gutters in residential areas may be an approved roll type with four inch (3") curb and twenty-four inch (24") minimum width made of six

Johnson County Subdivision Ordinance 48 Adopted February 19, 2002

Subdivision Control Ordinance

- of the aggregate used in each cubic yard.
- Ready-mixed concrete shall be used in street construction except in extreme emergencies. Each ready-mix supplier shall provide certified mix analyses for all concrete provided.
 - Construction shall proceed in an orderly fashion with the contractor assuring that adequate equipment and sufficient labor to expedite the work is on the job site at all times.
 - Expressways, arterial highways, and primary thoroughfares shall be constructed with a minimum eight inch (8") thickness concrete and be reinforced with a minimum of one layer of 6 x 6/6 W.W.F. Secondary thoroughfares, collector streets, and minor residential streets shall be a minimum six inch (6") thickness concrete, with no reinforcing steel.
 - During construction activity, concrete trucks and other construction traffic shall not be allowed on a poured lane until a minimum of fourteen (14) days curing time has elapsed, or until concrete has reached design strength.
 - At the close of each day's work, a construction joint shall be made not less than ten feet, zero inches (10'-0") from the preceding transverse contraction joint. Sections less than ten feet, zero inches (10'-0") shall not be permitted.
 - The upper edges of all preformed expansion material in joints shall be parallel to the surface of the pavement and level therewith.
 - Transverse expansion joints shall be constructed only as specified on plans.
 - In the construction of an expansion joint with load transfer, the joint shall comply with plan details.
 - A joint holder will be required to hold the dowel bars accurately in place perpendicular to the cross section of the pavement and to the line of the joint.
 - A dummy joint shall be constructed at four feet, zero inches (4'-0") off back of curb and parallel with the curb line.
 - Contraction joints shall be installed at eighteen feet, zero inch (18'-0") intervals, at least one quarter of slab thickness, early enough to control cracking, but late enough to prevent damage by blade action if sawed, to slab surface and to the concrete immediately adjacent to the joint.
 - At junctions with an unpaved street, new pavement shall be thickened for at least twelve feet, zero inches (12'-0"), gradually increasing thickness to not less than one and one-third (1 1/3) times as thick as the designed slab. Three-quarter inch (3/4") by fifteen inch (15") dowel bars at eighteen inch (18") centers shall be properly placed in this end section and carefully bent down

Johnson County Subdivision Ordinance 45 Adopted February 19, 2002

Subdivision Control Ordinance

- bag concrete, and shall be six inch (6") vertical face in other areas and on arterial streets. Curbs shall have one and one-half inch (1 1/2") minimum depth control joints every ten feet, zero inches (10'-0"), and one-half inch (1/2 ") expansion material at all sides of structures.
5. Sidewalks
- For all proposed major residential, commercial, and industrial subdivisions, the subdivider shall provide sidewalks on both sides of the street, and a common area sidewalk shall be provided along the frontage of County roads. The sidewalks shall be at least four feet, zero inches (4'-0") wide and four inches (4") thick, underlaid with adequate granular material, sloped one-quarter inch (1/4") per foot toward the street and be located no closer than one foot, zero inches (1'-0") from property lines, and no closer than one foot, zero inches (1'-0") from the back of the curb. Handicap access ramps shall be provided where sidewalks join streets, at street intersections, and at the necks of cul-de-sacs.
6. Roadside Swales
- New and existing streets not having curbs and gutters shall provide the following:
- Side ditch swales measuring a minimum of one foot, zero inches (1'-0") deep at their centerline at a point four feet, zero inches (4'-0") inside the right-of-way line.
 - A shoulder width based on the road classification and dictated by the County Highway Engineer. In no case shall the shoulder be less than two feet (2) in width.
 - A swale or culvert at all driveways sized according to amount of storm water flow, as required to keep a ten-year rainfall event. All culverts shall extend at least five feet, zero inches (5'-0") beyond either edge of the paved driveway edge.
 - Culverts shall be installed under the roadway where necessary and be sized to carry, flowing full, a minimum of a ten-year rainfall event. All culverts shall extend at least five feet, zero inches (5'-0") beyond either edge of the paved roadway.
 - Relief of side ditches and swales along the roadway shall be accomplished through the use of off-street retention basins or existing drainage channels.

7. Street Identification Signs

It shall be the responsibility of the subdivider to provide and install street identification signs at all street intersections within the subdivision prior to the construction of any permanent improvements other than those specifically set forth by this Ordinance. Said signs and posts shall conform to the following standards or be of a design approved by the County Commissioners:

- Each signpost shall consist of a two-inch (2") galvanized Type A post, twelve feet, zero inches (12'-0") long with a minimum three feet (3') below grade, weighing two (2) pounds per foot.

Johnson County Subdivision Ordinance 49 Adopted February 19, 2002

Subdivision Control Ordinance

- after concrete is thoroughly set. The adjoining last fifty feet, zero inches (50'-0") of unpaved street shall be carefully graded and compacted to blend with new pavement.
- Wire mesh, if shown on plans or requested by the County Highway Engineer, shall be placed as directed and comply with provisions of AASHTO M 55" welded steel wire fabric for concrete reinforcement.
 - Unless otherwise specified, mesh shall be placed in the middle third of concrete and parallel to finished subgrade. The ends shall be more than two inches (2") back from joints, and the edges not more than three inches (3") from forms. Sheets shall be lapped the width of one mesh.
 - Asphalt filler shall meet the detailed requirements of the Indiana Department of Transportation.
 - Immediately upon completion of finishing process, the concrete shall be properly cured by use of curing blankets, plastic sheets, or liquid membrane forming compounds conforming to ASTM C309-53T. Failure to comply with requirements herein will result in rejection of the work.
- e. Asphaltic Concrete Street Pavement Standards
- Construction shall consist of a full-depth hot asphaltic concrete pavement on a compacted subgrade or hot asphaltic concrete on a compacted crushed stone base, with pavement thickness coordinated with the County Highway Engineer.
 - All materials, mixtures, and workmanship shall conform with current Indiana Department of Transportation specifications and all other applicable portions of Section 6-102-5 of this Ordinance.
 - Stub ends of streets shall have each layer of asphalt material extend at least two (2) feet beyond the end of the subsequent layer.

2. Minimum Paved Surface Dimensions

a. Local and cul-de-sac streets:

Width, with curb and gutter	28 feet*
Width, without curb and gutter	24 feet
Terminus diameter on cul-de-sac	90 feet
Residential use only	110 feet
School bus turn-arounds	
Radius at intersections	

Johnson County Subdivision Ordinance 46 Adopted February 19, 2002

Subdivision Control Ordinance

- Each sign shall be of a metal, double-blade design, green reflectorized with four-inch (4") or larger white gothic letters, mounted at the top of the post, with the street name on both sides.
 - Street signs shall be located within the street right-of-way, but no closer than six feet, zero inches (6'-0") from the edge of the traveled portion of the street, as shown on construction drawings.
8. Stop and Speed Limit Signs
- It shall be the responsibility of the subdivider to provide and install stop signs and speed limit signs prior to issuance of any building permits, including those for model homes. Permits for model homes may be issued if temporary signs are installed. The maximum posted speed limit shall be twenty-five (25) MPH unless otherwise approved by the Board of County Commissioners. Said signs and posts shall conform to the following standards or be of a design approved by the Board of County Commissioners:
- Each signpost shall consist of a two-inch (2") galvanized Type A post, twelve feet, zero inches (12'-0") long with a minimum three feet (3') below grade, weighing two (2) pounds per foot.
 - Each stop sign shall be a minimum of thirty inches (30") in width, and be of high-intensity finish (no baked enamel finish).
 - Each speed limit sign shall be a vertical rectangle with dimensions of twenty-four inches (24") by thirty inches (30") and be of high-intensity finish (no baked enamel finish).
 - Stop signs shall be installed so that the edge of the sign is a minimum of two feet, zero inches (2'-0") from the edge of the traveled portion of the street. The sign height shall be a minimum of seven feet, zero inches (7'-0") from the top of the curb to the bottom of the sign.
 - Speed limit signs shall be installed so that the edge of the sign is a minimum of two feet, zero inches (2'-0") from the back edge of the curb, or a minimum of two feet, zero inches (2'-0") from the back edge of a shoulder, if present or proposed, as shown on construction drawings.

C. DRAINAGE

- A drainage system shall be designed and constructed by the subdivider to provide for the proper drainage of surface water from the entire subdivision and the drainage area of which it is a part. The system shall be constructed and installed in accordance with plans and specifications approved by the County Commissioners and Drainage Board.
- In designing a drainage system, the subdivider shall be guided by the following minimum standards:

Johnson County Subdivision Ordinance 50 Adopted February 19, 2002



Within Indiana Call
811 or 800-332-5544
24 Hours a Day, 7 Days a Week

PER INDIANA STATE LAW IC 8-1-26,
IT IS AGAINST THE LAW TO EXCAVATE
WITHOUT NOTIFYING THE UNDERGROUND
LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
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800 | 452 - 6408
317 | 843 - 0546 /ax
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ENGINEERS
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B u i l d w i t h c o n f i d e n c e .

PROJECT NO.: W21.0353
DWG NAME: C405 Sheet Details
DESIGNED BY: JCS
CHECKED BY: JCS
DATE: 05-03-2022

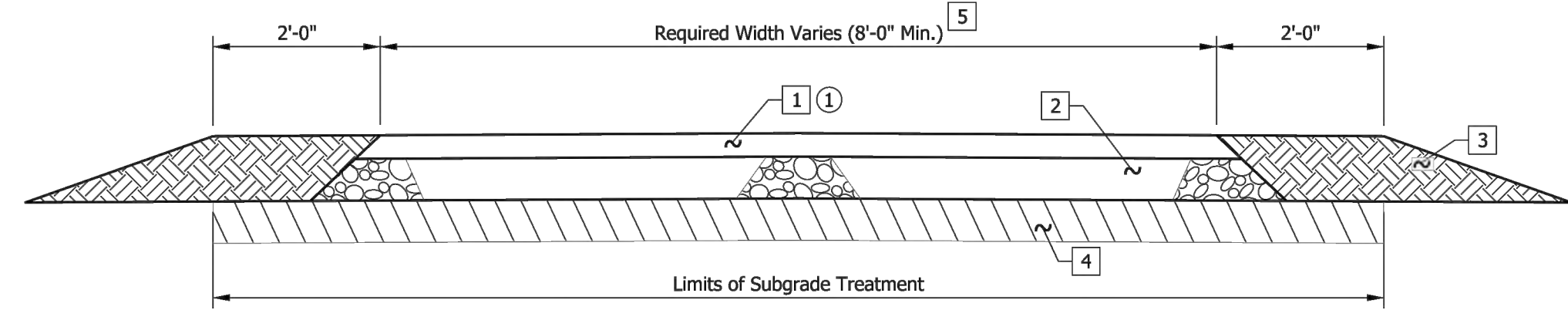
REVISIONS AND ISSUES	BY	DATE
APPROVAL PENDING FOR CONSTRUCTION		

APPROVAL PENDING
NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STREET DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C405
PROJECT NO.
W21.0353

LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\standard\Call Sheet Details.dwg
DATE: August 10, 2021 - 12:20pm
PLOT: 10/25/2021 10:25:21 AM



NOTE:
1 Construct safety edge as required for Surface and Intermediate layers at edge of pavement.

- LEGEND**
- 1 HMA for Sidewalk Consisting of 140 lb/yd² HMA Surface, Type B, on 220 lb/yd² HMA Intermediate, Type B
 - 2 6" Compacted Aggregate No. 53, Base
 - 3 Earth Shoulder
 - 4 Subgrade Treatment Type III, 6" of Soil Compacted to the Density and Moisture Requirement
 - 5 Width and Cross Slope as Required

INDIANA DEPARTMENT OF TRANSPORTATION

NON-MOTORIZED VEHICLE USE FACILITY
HMA PAVEMENT SECTION

SEPTEMBER 2017

STANDARD DRAWING NO. E 604-NVUF-01

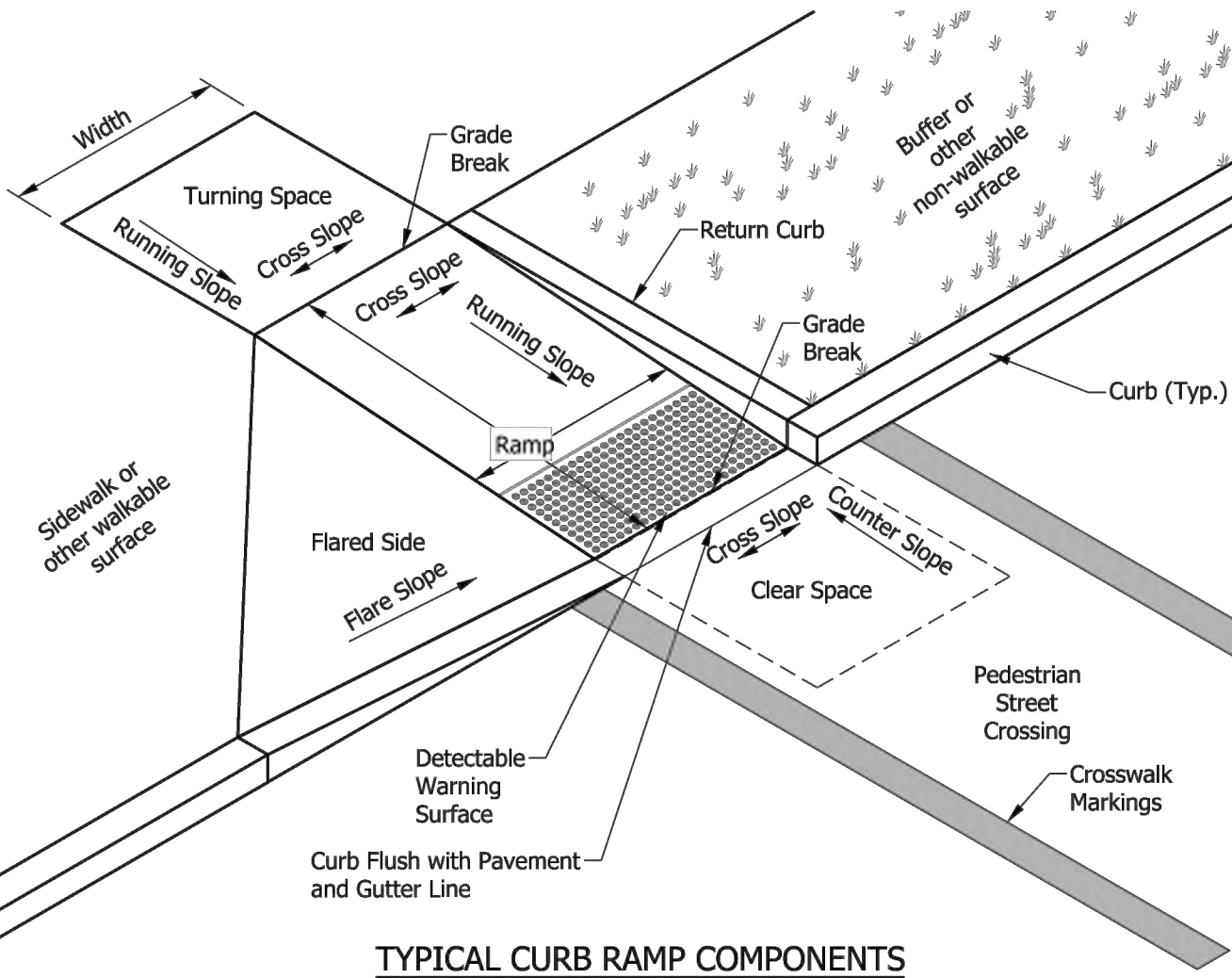
REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 04/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/28/17
CHIEF ENGINEER DATE

INDEX	
SHEET NO.	SUBJECT
1	Curb Ramp Drawing Index and General Notes
2-3	Perpendicular Curb Ramp Typical Placement
4	Perpendicular Curb Ramp Component Details
5	One-Way-Directional Perpendicular Curb Ramp Typical Placement
6	One-Way-Directional Perpendicular Curb Ramp Component Details
7	Parallel Curb Ramps Typical Placement
8	Parallel Curb Ramp Component Details
9	Blended Transition Curb Ramp, Depressed Curb Ramp and Diagonal Curb Ramp Typical Placement
10	Blended Transition Curb Ramp Component Details
11	Median Cut-Through and Median Perpendicular Curb Ramp Typical Placement
12-13	Detectable Warning Surface Placement and Configuration
14	Detectable Warning Surface Details

- GENERAL NOTES:**
- All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
 - Ramp or Blended Transition. A ramp or blended transition shall be used to lower or raise the sidewalk to connect with the street or highway.
 - Turning Space. A turning space shall be provided at the top of a perpendicular ramp, bottom of a parallel ramp, or where the pedestrian travel requires a change in direction. A common turning space may be shared by adjacent ramps. The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk by a curb, retaining wall, building, or feature over 2 inches in height, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.
 - Flared Side. A flared side shall be used adjacent to a walkable surface. A flared side may be used adjacent to a non-walkable surface. A flared side shall have a maximum slope of 10.00% measured parallel to the back of the curb.
 - Return Curb. A return curb is placed perpendicular to the roadway curb. A return curb may be used adjacent to a non-walkable surface. A return curb shall not be used adjacent to a walkable surface. The return curb may be omitted where the non-walkable surface is flared and the curb adjacent the roadway is tapered to meet the flush curb at the bottom of the ramp.
 - Clear Space. A clear space shall be provided beyond the bottom grade break of a curb ramp wholly contained within the crosswalk and wholly outside the parallel vehicular travel path. The clear space shall have a minimum clear dimension of 4 ft x 4 ft.
 - Detectable Warning Surface. A detectable warning surface shall consist of truncated domes and be placed at each street, highway, or railroad crossing. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and be placed the entire width of a ramp, blended transition, or turning space.
 - Running Slope. The running slope of a ramp, blended transition, or turning space shall be measured parallel to the direction of pedestrian travel.
 - A running slope of 2.00% or less is considered level.
 - A ramp shall have a maximum running slope of 8.33% but shall not require a ramp length to exceed 15 ft.
 - A blended transition shall have a maximum running slope of 5.00%.
 - A turning space shall have a maximum running slope of 2.00%.
 - Width. Unless otherwise noted, minimum width of a ramp, blended transition, or turning space, excluding flared sides or return curb, shall be 4 ft.
 - Grade Break. A grade break at the top and bottom of a ramp, blended transition, or turning space shall be perpendicular to the running slope. Grade breaks shall not be within the ramp, blended transition, turning space, or detectable warning surface. Grade breaks shall be flush. Vertical discontinuities shall not be greater than 1/2 in. Where a discontinuity is greater than 1/4 in., the surface shall be beveled with a slope not steeper than 1V:2H.
 - Cross Slope Exceptions. The cross slope of a ramp, blended transition, or turning space shall be measured perpendicular to the direction of pedestrian travel.
 - The maximum cross slope at a pedestrian street crossing without posted yield or stop control shall be 5.00%.
 - The maximum cross slope at a pedestrian street crossing with posted yield or stop control shall be 2.00%.
 - The maximum cross slope at a midblock crossing shall be the established grade of the adjacent roadway.
 - Counter Slope. A counter slope is the cross slope of the gutter or street adjacent the running slope of the ramp, blended transition, or turning space. See Standard Drawing E 604-SWCR-14 for counter slope details.
 - Objects such as a utility cover, vault frame, and grating shall be placed outside the curb ramp.
 - Curb ramps shall be placed within the marked crosswalk area.
 - Drainage inlets should be located uphill from a curb ramp to prevent ponding in the path of pedestrian travel.



TYPICAL CURB RAMP COMPONENTS

INDIANA DEPARTMENT OF TRANSPORTATION

CURB RAMP DRAWING INDEX
AND GENERAL NOTES

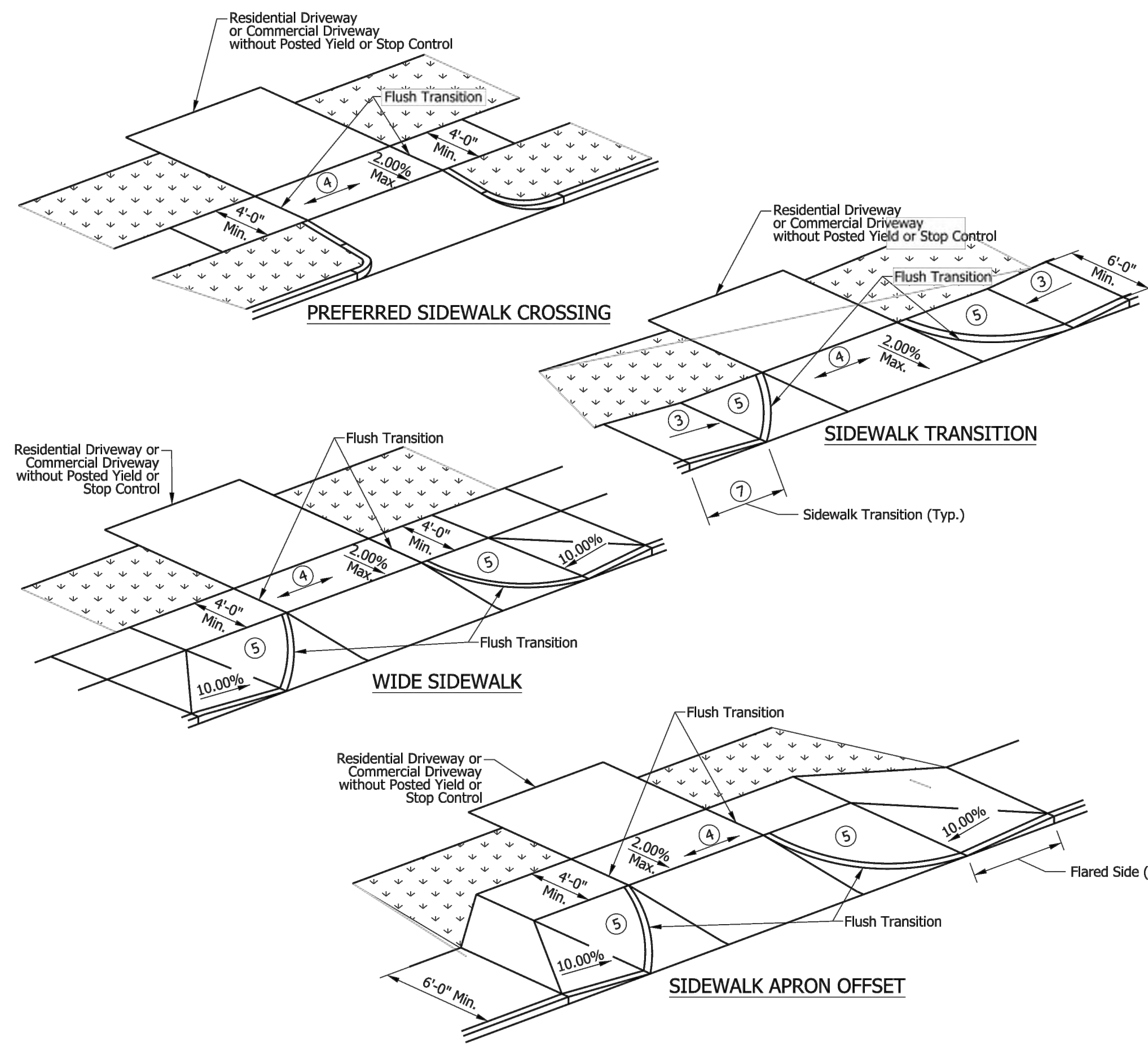
SEPTEMBER 2018

STANDARD DRAWING NO. E 604-SWCR-01

REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 03/20/18
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE



- NOTES:**
- All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
 - A sidewalk driveway crossing shall only be used on a sidewalk at a residential driveway or a commercial driveway without posted yield or stop control. A curb ramp shall be used at all other crossings. See Standard Drawing Series E 604-SWCR for curb ramp details.
 - Where a sidewalk transition is used to lower or raise the sidewalk to connect with a residential driveway or commercial driveway without posted yield or stop control, the running slope of the transition shall be 8.33% maximum.
 - The grade of the sidewalk across the driveway shall not exceed the grade of the adjacent roadway.
 - The area between the driveway and a flared side or sidewalk transition shall match the driveway profile and transverse slope.
 - A turning space is not required at the top of a sidewalk transition.
 - Objects such as a utility cover, vault frame, and grating shall be placed outside a sidewalk transition.
 - A detectable warning surface shall not be placed at the crossings of a residential driveway. A detectable warning surface may be placed at the crossing of a commercial driveway without yield or stop control.
 - See Standard Drawing E 604-SDWK-01 and -02 for Sidewalk Details.
 - See Standard Drawing Series E 610-DRIV for drives.

INDIANA DEPARTMENT OF TRANSPORTATION

SIDEWALK DRIVEWAY CROSSING

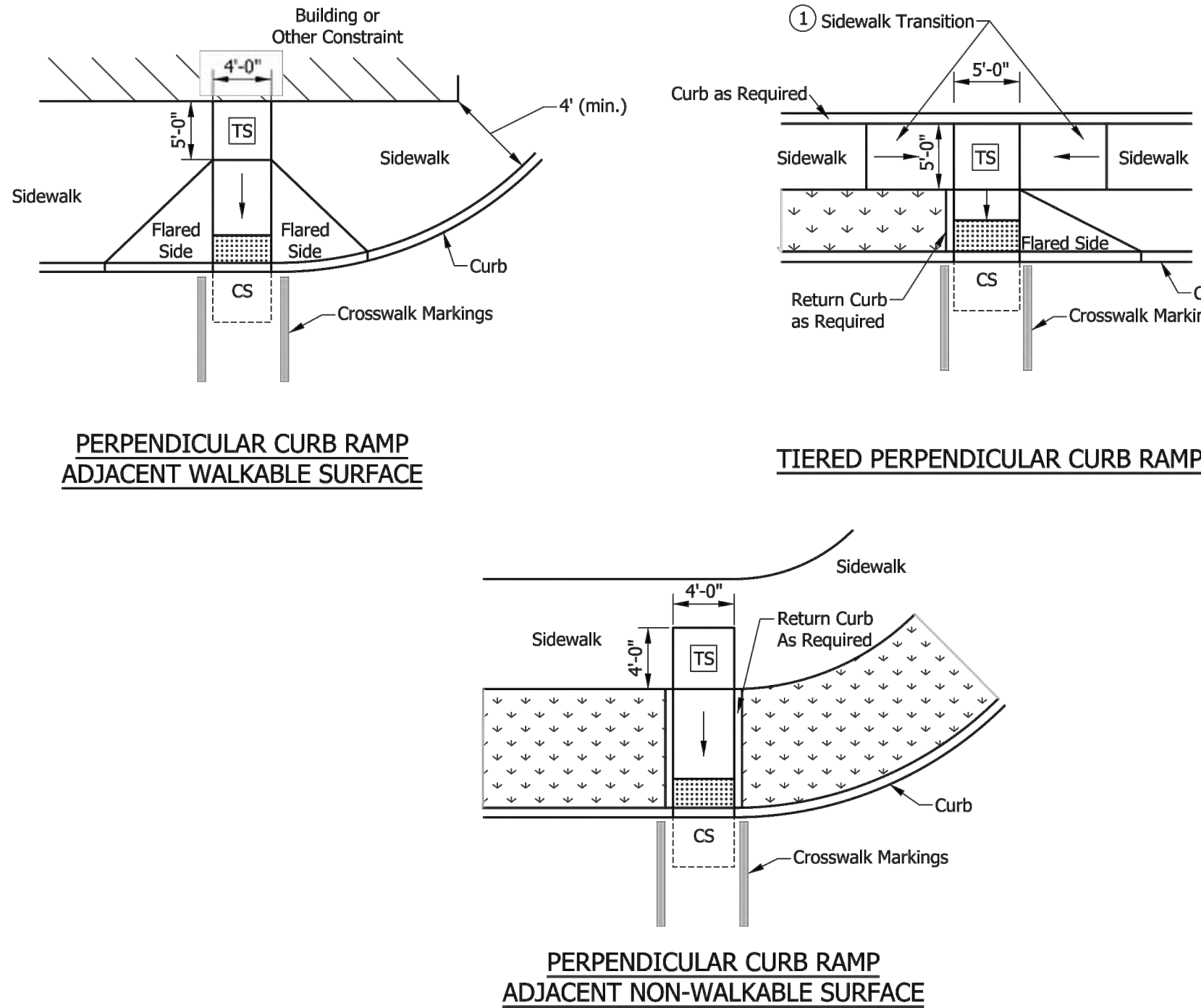
SEPTEMBER 2016

STANDARD DRAWING NO. E 604-SDWK-03

REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 03/16/16
DESIGN STANDARDS ENGINEER DATE

/s/ Mark A. Miller 03/18/16
CHIEF ENGINEER DATE



- NOTES:**
- Where insufficient width between the curb and back of sidewalk prevent a standard perpendicular curb ramp running slope, a sidewalk transition may be used to lower the sidewalk grade. The sidewalk transition running slope shall not exceed 8.33%. See Standard Drawing Series E 604-SDWK for sidewalk details.
 - The turning space shall have a minimum clear dimension of 4 ft x 4 ft and a running slope of 2.00% maximum. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.

INDIANA DEPARTMENT OF TRANSPORTATION

PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT

SEPTEMBER 2018

STANDARD DRAWING NO. E 604-SWCR-02

REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE

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PROJECT NO: W21.0353
DWG NAME: C406 Street Details
DESIGNED BY: JSS
DRAWN BY: MEN
CHECKED BY: JP
DATE: 05-03-2022

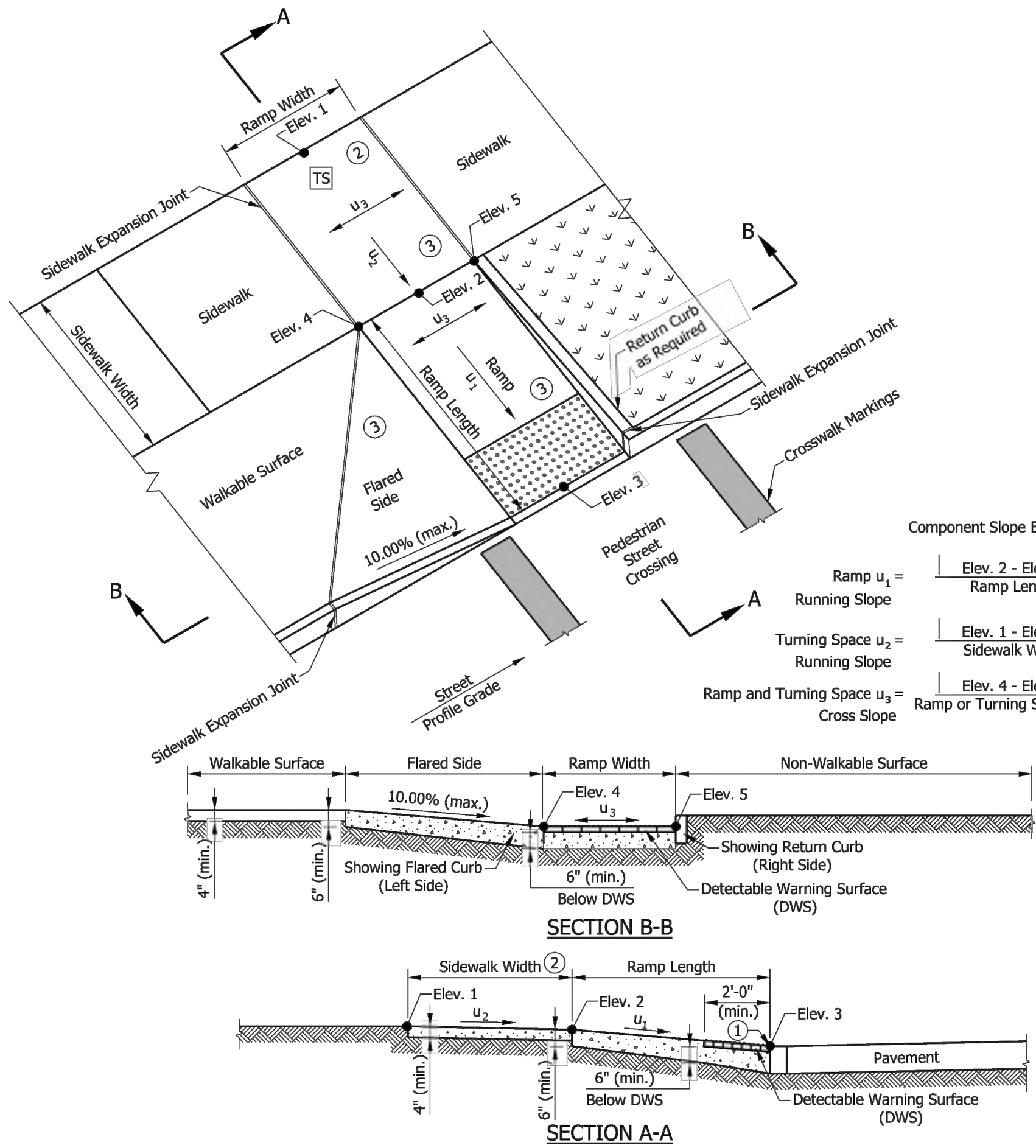
REVISIONS AND ISSUES

APPROVAL PENDING NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STREET DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C406
PROJECT NO.
W21.0353

LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\standard\604-SWCR-05.dwg
DATE: August 18, 2021 - 12:29pm
PLOT: 10/18/2021 10:18:33



NOTES:

- The bottom edge of the ramp and top of curb shall be flush with the edge of adjacent pavement and gutter line.
- The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope. Where a tiered perpendicular curb ramp is used, a constrained turning space shall have a minimum clear dimension of 5 ft x 5 ft.
- Curb ramp surface shall be coarse broomed transverse to the running slope.
- See Standard Drawing E 604-SWCR-01 for cross slope exceptions.
- See Standard Drawing E 604-SWCR-12, -13, and -14 for Detectable Warning Surface placement, configuration, and details.
- See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.

LEGEND:

- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface
- Turning Space

INDIANA DEPARTMENT OF TRANSPORTATION

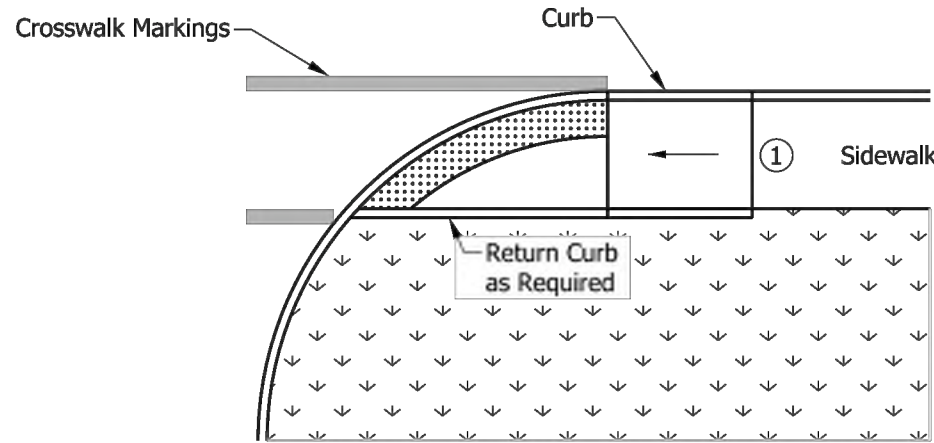
PERPENDICULAR CURB RAMP
COMPONENT DETAILS

SEPTEMBER 2018

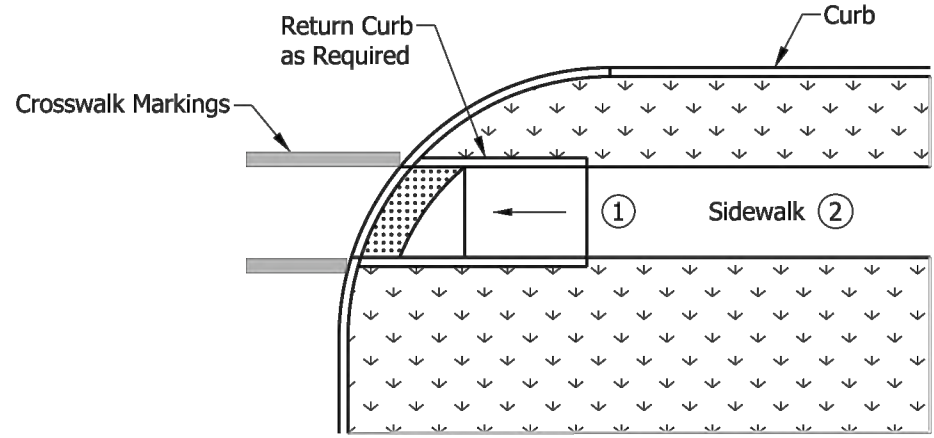
STANDARD DRAWING NO. E 604-SWCR-04



/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE



ONE-WAY DIRECTIONAL PERPENDICULAR CURB RAMP ADJACENT CURB



ONE-WAY DIRECTIONAL PERPENDICULAR CURB RAMP WITH BUFFER

NOTES:

- A turning space is not required at the top of the ramp for a one-way directional perpendicular curb ramp.
- Where there is no buffer between the sidewalk and curb the preferred minimum sidewalk width is 6 ft. Where a buffer is placed between the sidewalk and curb, the preferred minimum sidewalk width is 5 ft. See Standard Drawing Series E 604-SDWK for sidewalk details.

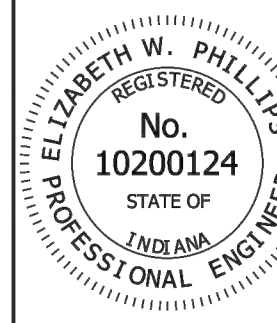
LEGEND:

- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface

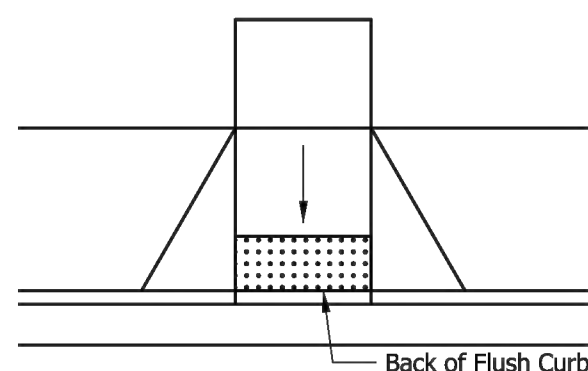
INDIANA DEPARTMENT OF TRANSPORTATION

ONE-WAY DIRECTIONAL
PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT
SEPTEMBER 2016

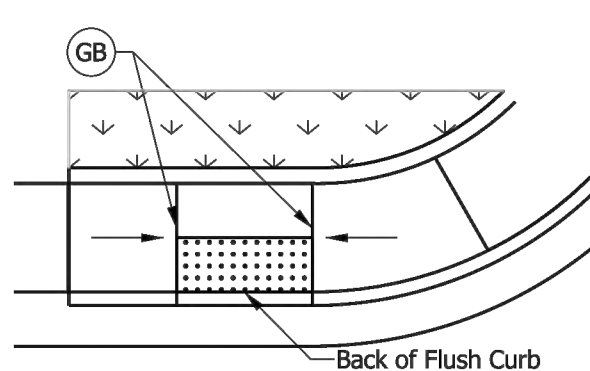
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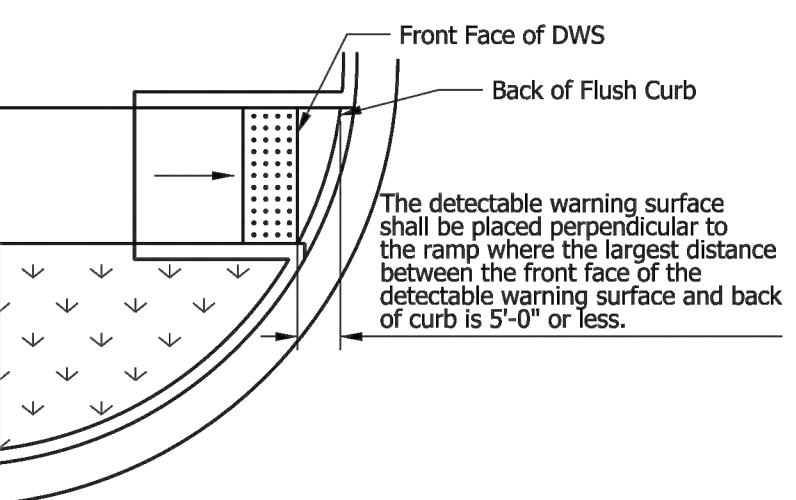
/s/ Elizabeth W. Phillips 03/15/16
DESIGN STANDARDS ENGINEER DATE
/s/ Mark A. Miller 03/18/16
CHIEF ENGINEER DATE



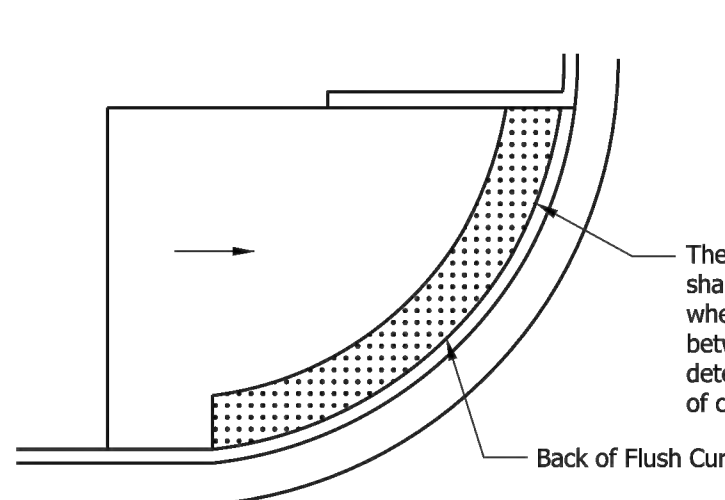
PERPENDICULAR CURB RAMP



PARALLEL CURB RAMP



ONE-WAY DIRECTIONAL PERPENDICULAR CURB RAMP ON A RADIUS



DEPRESSED CORNER CURB RAMP

LEGEND:

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface (DWS)
- Ramp
- Grade Break

NOTES:

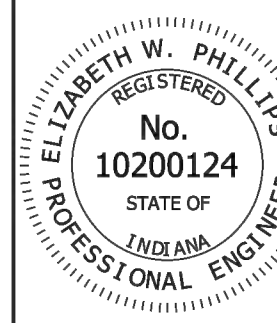
- A detectable warning surface shall be placed at each street, highway, or railroad crossing. See Standard Drawing E 604-SDWK-03 for a detectable warning surface placement at a sidewalk driveway crossing.
- The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
- Where the distance from the face of the detectable warning surface is 5 ft or less from the back of curb, the detectable warning surface shall be placed perpendicular to the ramp. Where the distance from the face of the detectable warning surface is more than 5 ft from the back of curb, the detectable warning surface shall be placed at the back of curb as shown or in an alternate placement configuration. See Standard Drawing E 604-SWCR-13 for alternate detectable warning surface placement.
- The detectable warning surface on a parallel curb ramp shall be placed on the turning space at the flush transition between the street and turning space at the back of curb.
- The detectable warning surface on a blended transition or depressed corner shall be placed at the back of curb as shown or in an alternate placement configuration. See Standard Drawing E 604-SWCR-13 for alternate detectable warning surface placement.
- See Standard Drawing E 604-SWCR-14 for detectable warning surface details.

INDIANA DEPARTMENT OF TRANSPORTATION

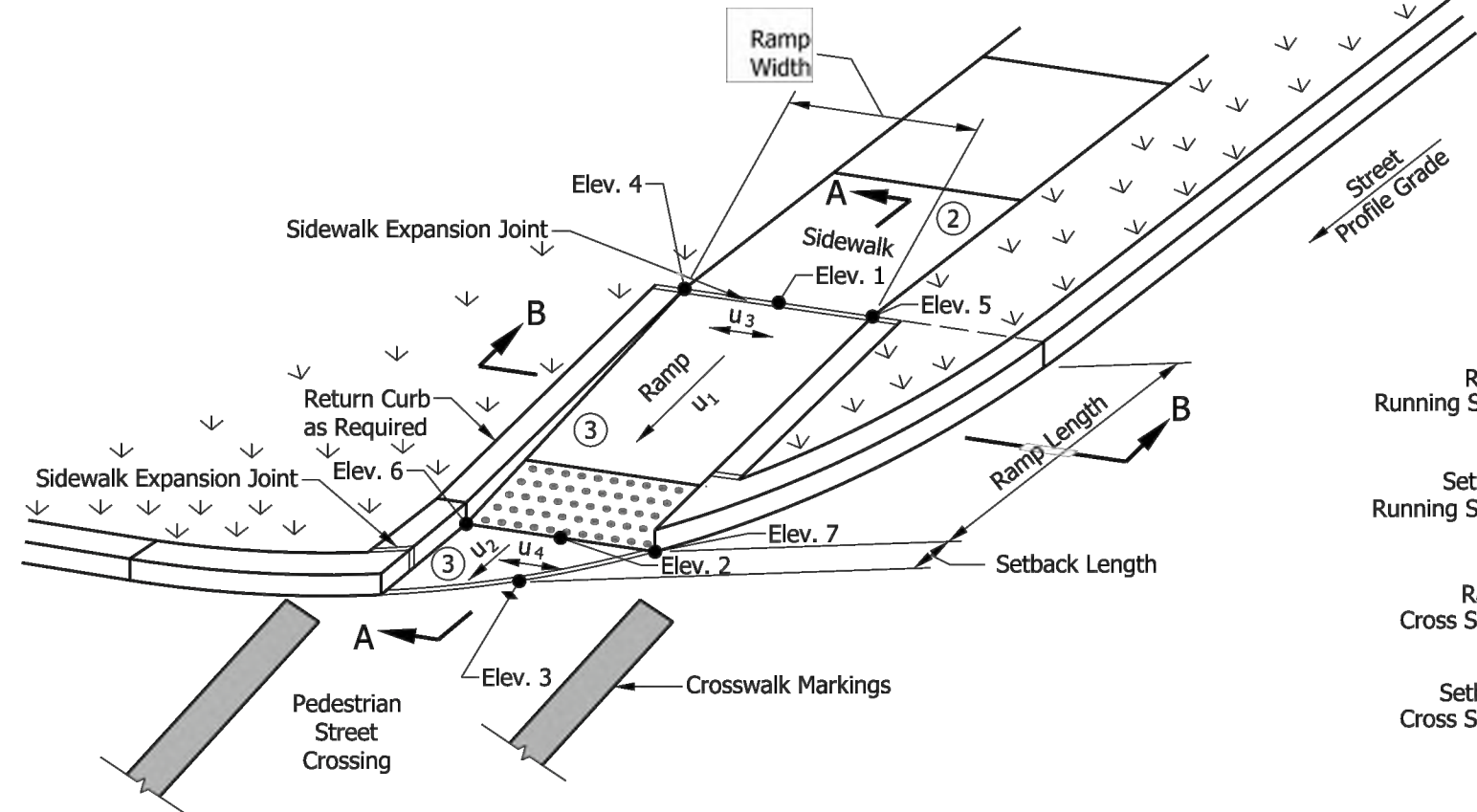
DETECTABLE WARNING SURFACE
PLACEMENT AND CONFIGURATION

SEPTEMBER 2018

STANDARD DRAWING NO. E 604-SWCR-12



/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE



NOTES:

- The bottom edge of the ramp or setback and top of curb shall be flush with the edge of adjacent pavement and gutter line.
- A turning space is not required at the top of the ramp for a one-way directional perpendicular curb ramp.
- Curb ramp surface shall be coarse broomed transverse to the running slope.
- See Standard Drawing E 604-SWCR-01 for cross slope exceptions.
- See Standard Drawing E 604-SWCR-12, -13, and -14 for Detectable Warning Surface placement, configuration, and details.
- See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.

LEGEND:

- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface

INDIANA DEPARTMENT OF TRANSPORTATION

ONE-WAY DIRECTIONAL PERPENDICULAR
CURB RAMP COMPONENT DETAILS

SEPTEMBER 2018

STANDARD DRAWING NO. E 604-SWCR-06



/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE

REVISIONS AND ISSUES

PROJECT NO: W21.0353
DWG NAME: C407 Street Details
DESIGNED BY: JLS
DRAWN BY: JLS
CHECKED BY: JLS
DATE: 05-03-2022

APPROVAL PENDING
NOT FOR CONSTRUCTION

LENNAR

DEERFIELD SECTION 1

SHEET NO.

C407

PROJECT NO.

W21.0353

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

STREET DETAILS

Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

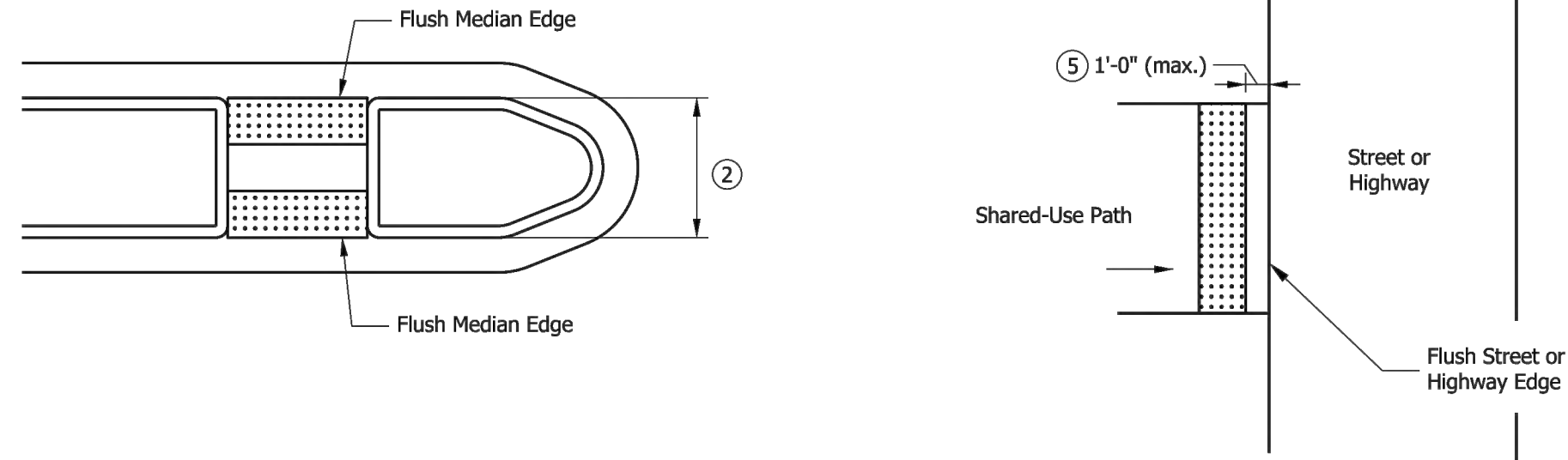
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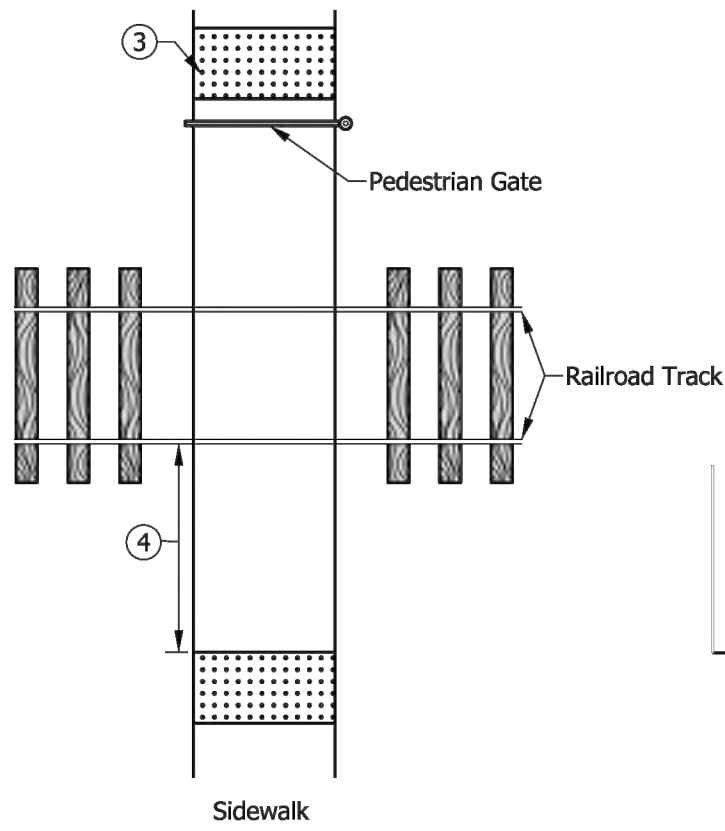
ENGINEERS

Land Surveying | Civil Engineering
Landscape Architecture

LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\standard\Call Sheet Details.dwg
DATE: 08/16/2021
DRAWN BY: J. Miller
PLOT: 08/16/2021



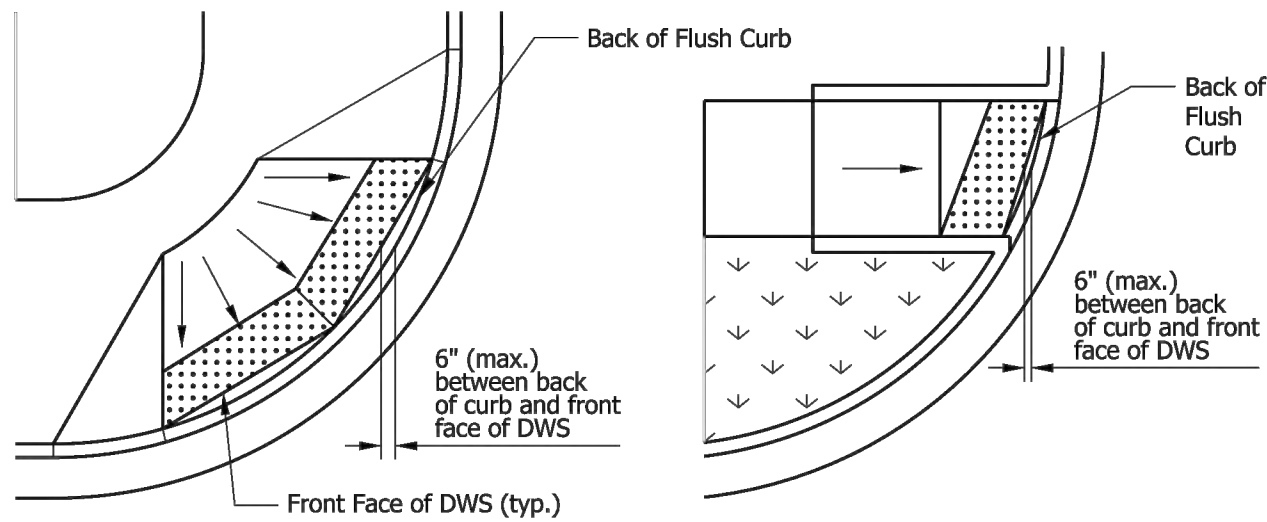
SHARED-USE PATH



RAILROAD CROSSING

LEGEND:

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface (DWS)
- Ramp
- GB Grade Break



ALTERNATE DETECTABLE WARNING SURFACE PLACEMENT ⑥

NOTES:

- The detectable warning surface shall extend a minimum length of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break. The edges of adjacent panels shall be parallel and tightly abutted.
- The detectable warning surface on a median cut-through shall be placed at the flush transition between the street and median cut-through. Where a median is less than 6ft, a detectable warning surface shall not be placed.
- Where a pedestrian gate is provided at a railroad crossing, the detectable warning surface shall be placed on the side of the gate opposite the railroad crossing.
- The edge of the detectable warning surface nearest to the railroad crossing shall be placed 6 ft minimum and 15 ft maximum from the centerline of the nearest rail.
- Where shared-use path intersects a street or highway, the detectable warning surface shall be placed on the shared-use path within 1 ft of the street or highway edge.
- Plate ends shall be placed at the back of curb. The distance between the back of curb and the front face of the detectable warning surface shall not exceed 6 in. between the ends.
- See Standard Drawing E 604-SWCR-14 for detectable warning surface details.

INDIANA DEPARTMENT OF TRANSPORTATION

DETECTABLE WARNING SURFACE
PLACEMENT AND CONFIGURATION

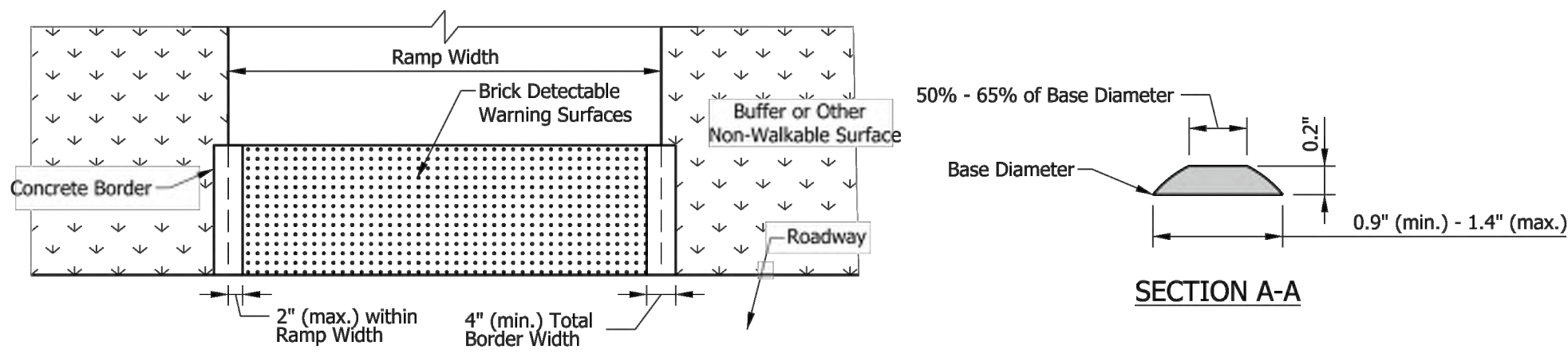
SEPTEMBER 2018

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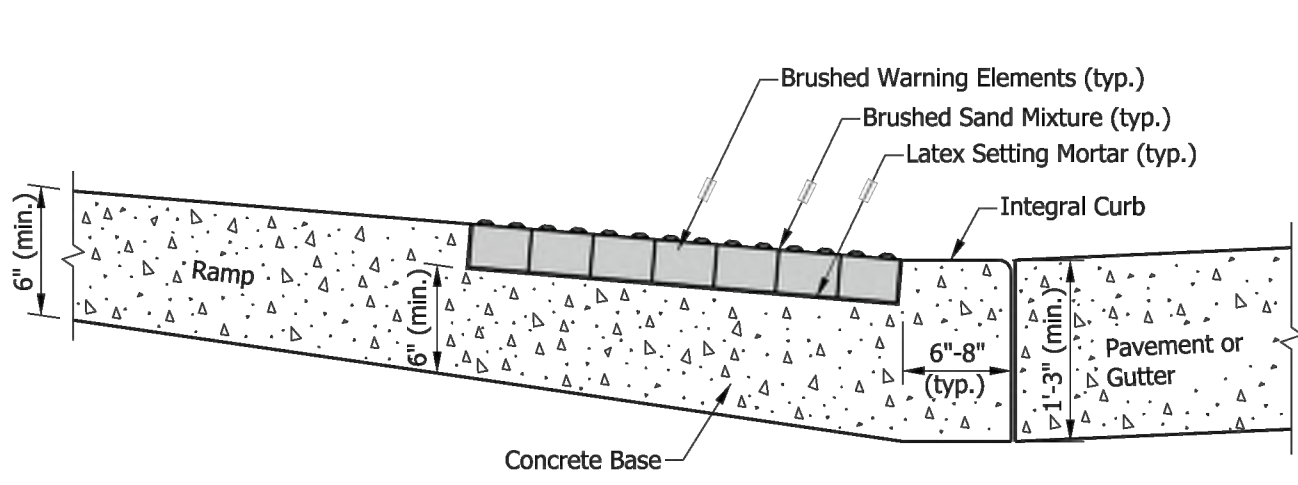
REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE

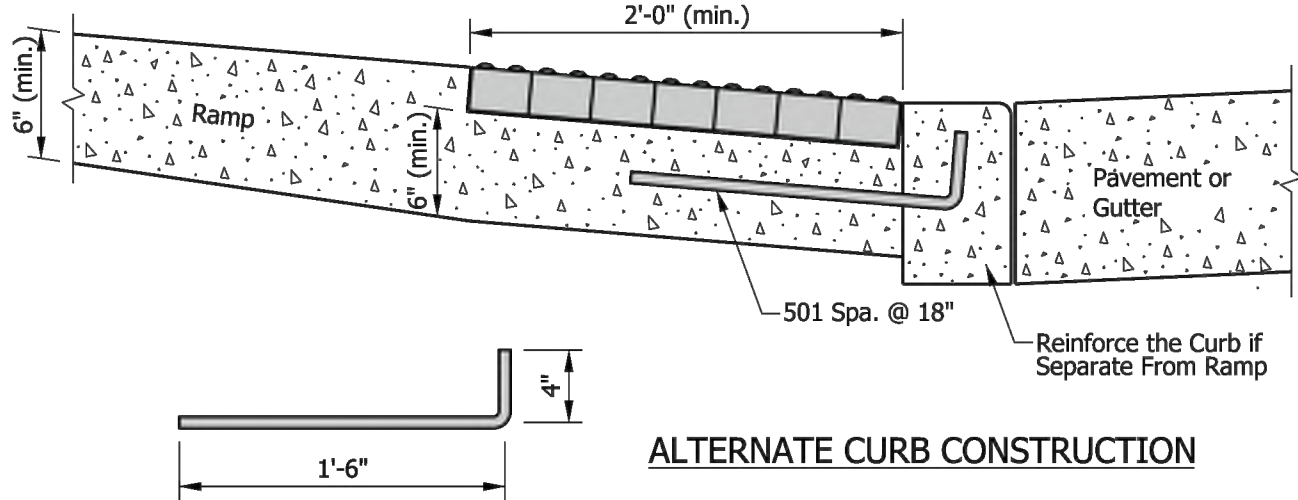
/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE



BRICK DETECTABLE WARNING SURFACE WITH CONCRETE BORDER ⑥ ⑦

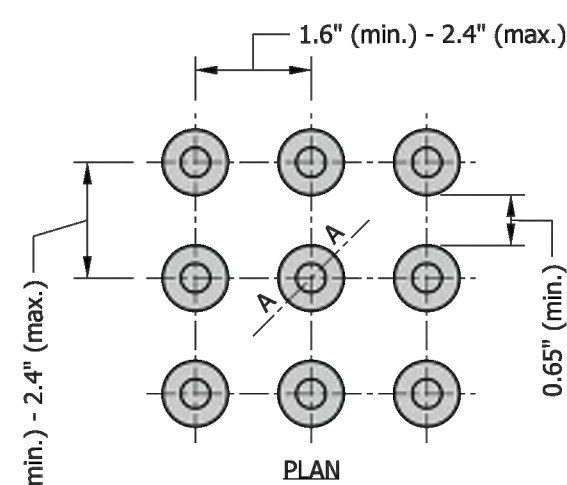


TYPICAL RAMP AND BRICK SURFACE CONSTRUCTION DETAIL

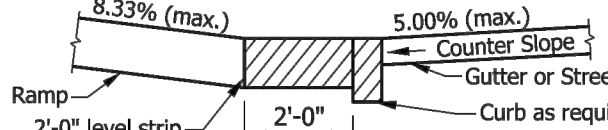


501 x 1'-10"

ALTERNATE CURB CONSTRUCTION



TRUNCATED DOMES



CHANGE OF GRADE > 11% ⑤

NOTES:

- Detectable warning surface shall consist of truncated domes. Domes shall be aligned in a square or radial grid pattern with diameter and center-to-center spacing within the ranges specified.
- The detectable warning surface may be field cut. Truncated dome spacing between adjacent panels shall be within the ranges specified.
- The detectable warning surface shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.
- The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
- The maximum counter slope of the gutter or street at the bottom of the ramp shall be 5.00%. Where the algebraic difference between the running slope and the counter slope exceeds 11%, a 2-ft minimum level strip should be provided at the bottom of the ramp.
- Where a concrete border is used for forming, the border shall be cast monolithically with the curb ramp concrete. The concrete border shall not reduce the ramp width by more than 2 in. on each side.
- Where forming other than a concrete border is used, the edge restraint shall not encroach upon the ramp width.

INDIANA DEPARTMENT OF TRANSPORTATION

DETECTABLE WARNING SURFACE DETAILS

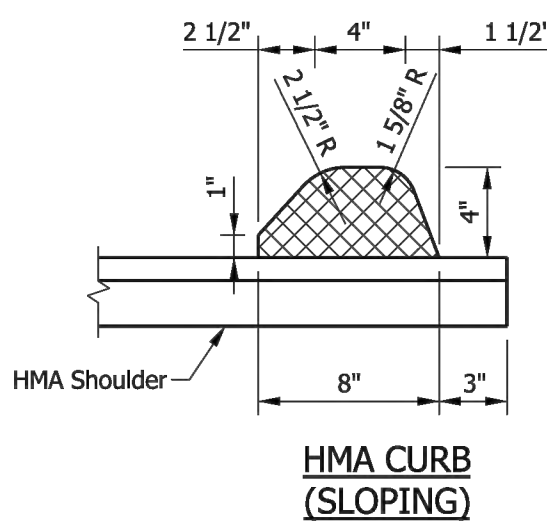
SEPTEMBER 2018

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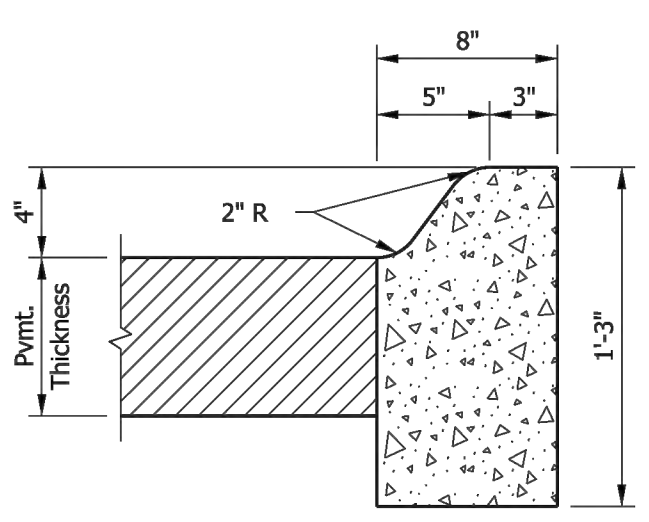
REGISTERED PROFESSIONAL ENGINEER
No. 10200124
STATE OF INDIANA

/s/ Elizabeth W. Phillips 03/29/18
DESIGN STANDARDS ENGINEER DATE

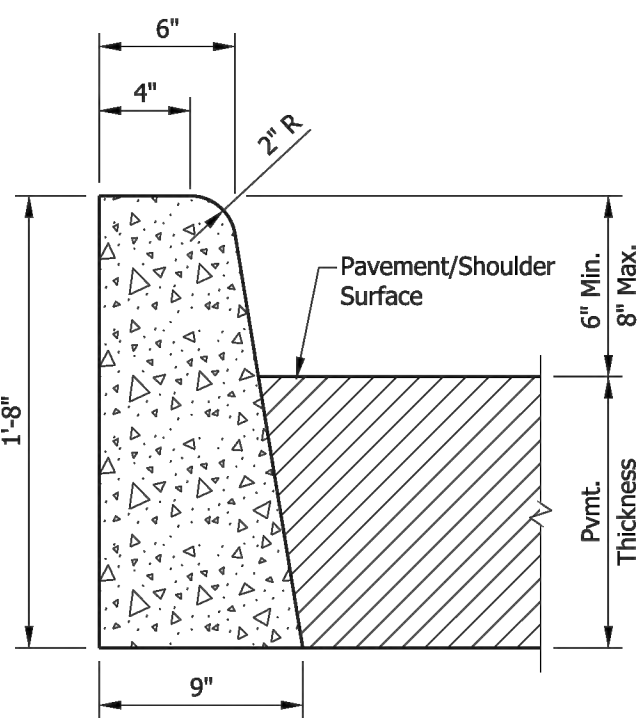
/s/ John Leckie 04/25/18
CHIEF ENGINEER DATE



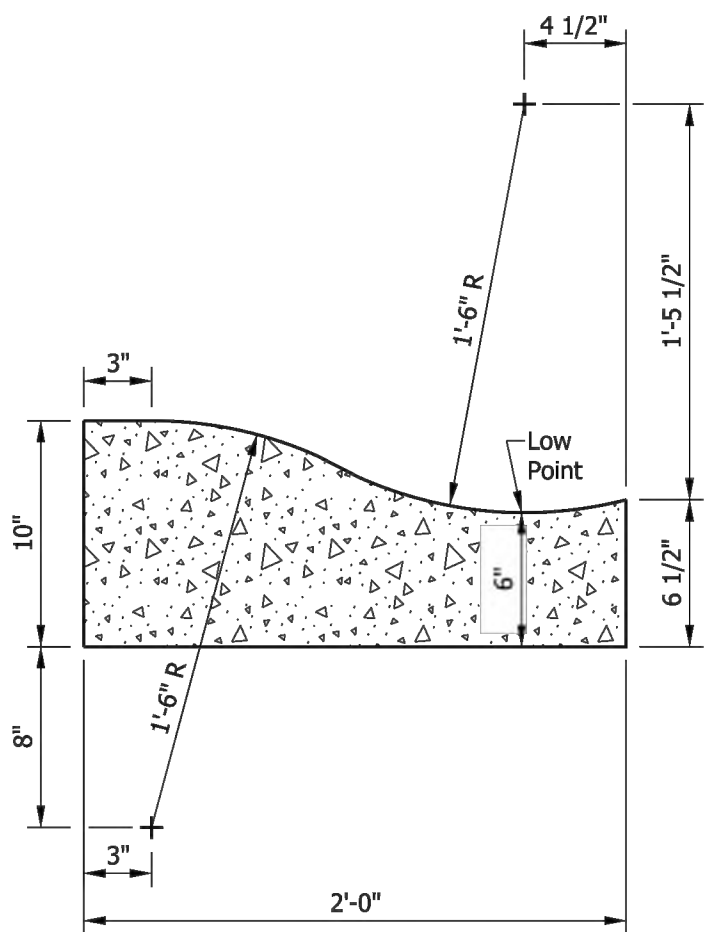
HMA CURB (SLOPING)



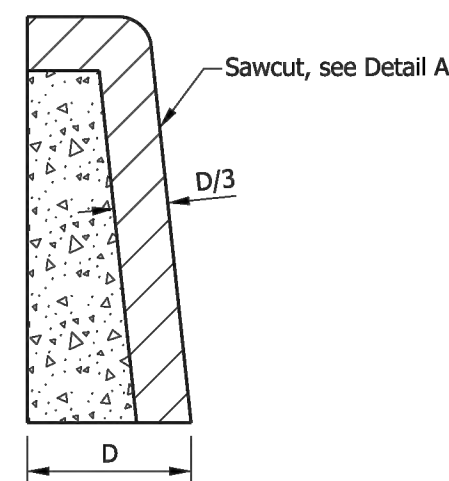
CONCRETE CURB TYPE B (SLOPING)



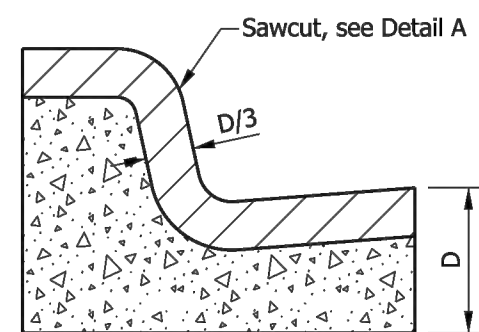
CONCRETE CURB (VERTICAL)



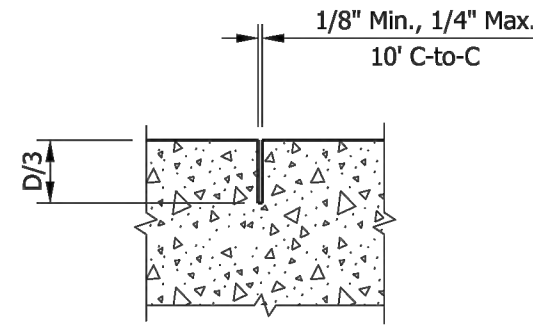
ROLLED CURB (SLOPING)



CURB SECTION AT JOINT



COMBINED CURB AND GUTTER SECTION AT JOINT



DETAIL A

SAWED CONTRACTION JOINTS FOR CURB AND COMBINED CURB & GUTTER

INDIANA DEPARTMENT OF TRANSPORTATION

CONCRETE AND HMA CURBS AND SAWED JOINTS

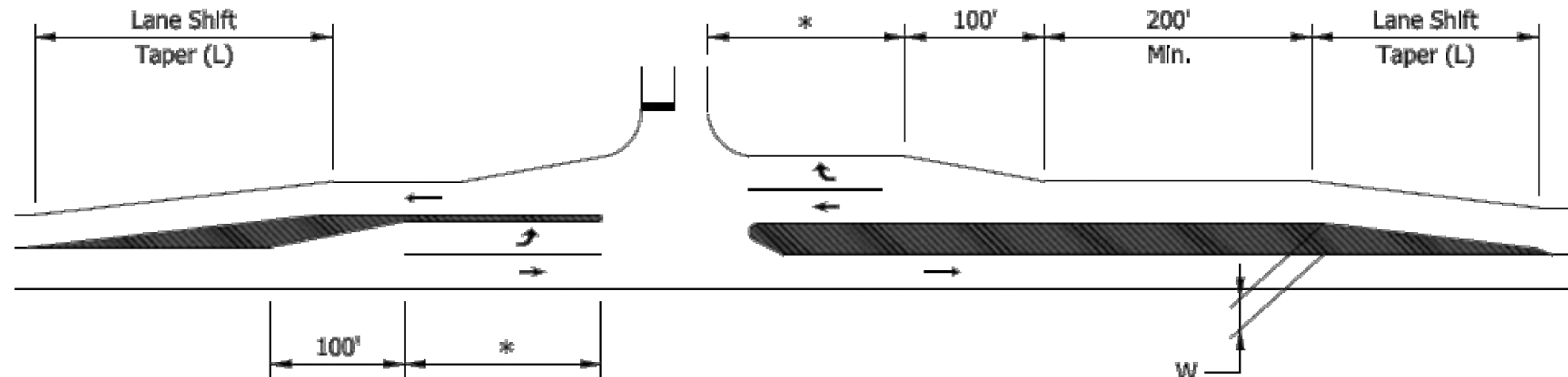
SEPTEMBER 2014

STANDARD DRAWING NO. E-605-CCSJ-01

REGISTERED PROFESSIONAL ENGINEER
No. 9750
STATE OF INDIANA

/s/ Richard L. VanCleave 06/20/13
DESIGN STANDARDS ENGINEER DATE

/s/ Mark A. Miller 09/26/13
CHIEF ENGINEER DATE



Design Speed, S (mph)	Taper Rate
20	10:1
25	10:1
30	15:1
35	20:1
40	30:1
45	45:1
50	50:1
55	55:1
60	60:1

Taper Rate = S for S ≥ 45 mph

Taper Rate = $\frac{S^2}{60}$ for S < 45mph

W= Horizontal lane shift, ft

L = W x S (S ≥ 45 mph)

L = W x $\frac{S^2}{60}$ (S < 45mph)

*See Section 46-4.02 for minimum turn-lane length.

CHANNELIZED TURN LANE FOR 2-LANE HIGHWAY

Figure 46-4M



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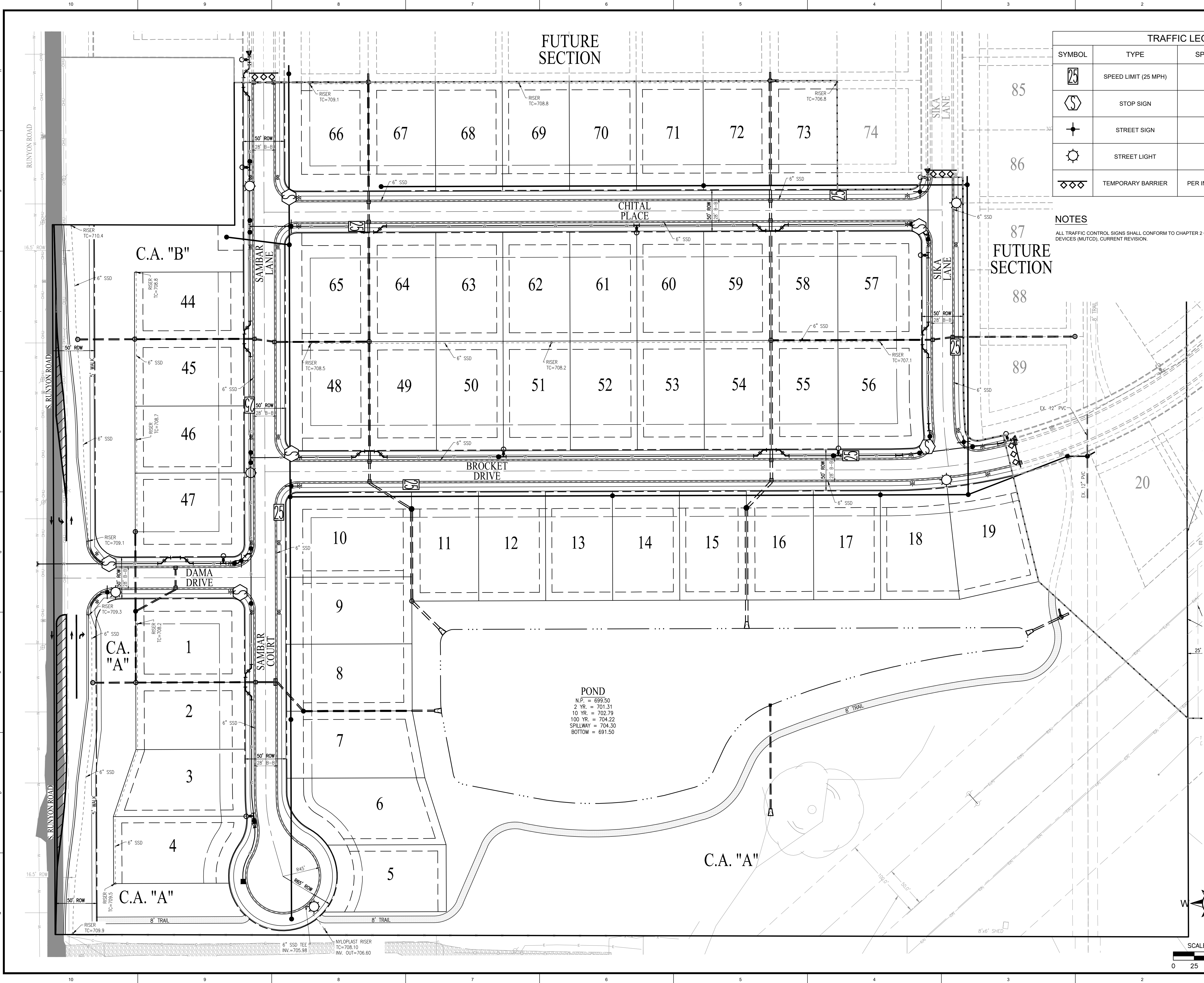
PROJECT NO.	W21.0353
DWG NAME	C405 Sheet Details
DESIGNED BY	SSS
DRAWN BY	MEN
CHECKED BY	JP
DATE	05-03-2022

APPROVAL PENDING
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DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STREET DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

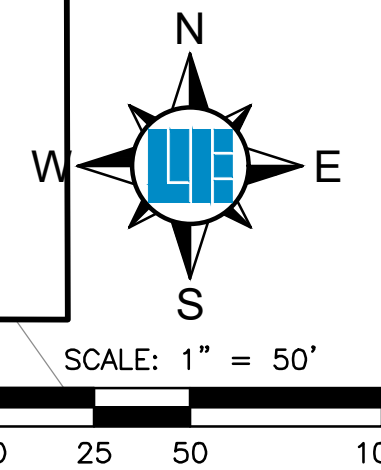
SHEET NO.
C408
PROJECT NO.
W21.0353

LOCATION: 13201 W210353 Section 10/Engineering/Design/Drawings/C409 Traffic Control and SSD Plan.rwg
DATE: August 18, 2022 - 12:13pm
PLOT: 13201 W210353 Section 10/Engineering/Design/Drawings/C409 Traffic Control and SSD Plan.rwg



TRAFFIC LEGEND			
SYMBOL	TYPE	SPECIFICATION	QUANTITY
	SPEED LIMIT (25 MPH)	FIG, P-15D	6
	STOP SIGN	R1-1	6
	STREET SIGN	FIG, P-15D	6
	STREET LIGHT	SEE DETAIL	6
	TEMPORARY BARRIER	PER INDOT STANDARDS	3

NOTES
ALL TRAFFIC CONTROL SIGNS SHALL CONFORM TO CHAPTER 2 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT REVISION.



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LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.

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DEERFIELD SECTION 1

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

TRAFFIC CONTROL, SIGNAGE AND SSD PLAN

Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

PROJECT NO. W21.0353

SHEET NO. C409

PROJECT NO. W21.0353

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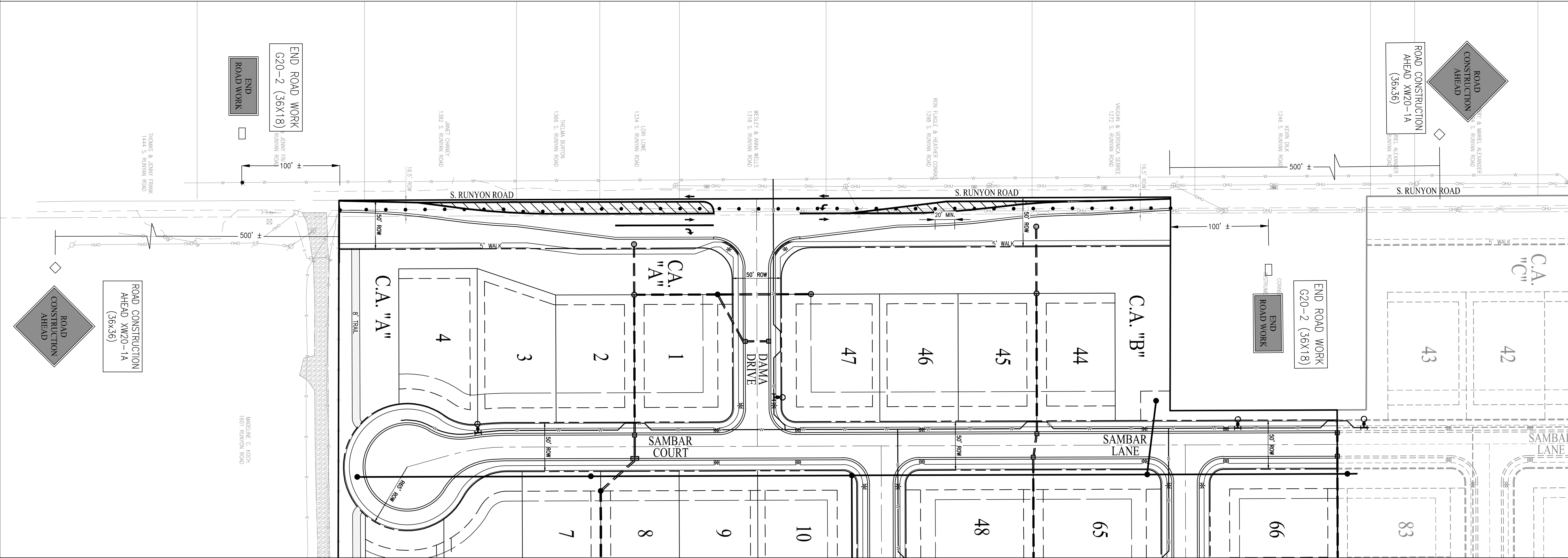
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DATE: August 18, 2022 - 12:23pm
DRAWN BY: illans



MAINTENANCE OF TRAFFIC
S. RUNYON ROAD

LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- STORM BEEHIVE INLET
- STORM INLET
- TOP OF CASTING
- INVERT
- REINFORCED CONCRETE PIPE
- MANHOLE
- STRUCTURE
- DRAINAGE EASEMENT
- DRAINAGE UTILITY AND SANITARY SEWER EASEMENT
- DRAINAGE UTILITY AND SEWER EASEMENT
- CONCRETE END SECTION
- MATCH EXISTING
- TYPICAL
- PROPOSED
- EXISTING
- RADIUS
- VARIABLE WIDTH
- RIGHT-OF-WAY
- BACK OF CURB
- BUILDING SETBACK LINE
- ADA RAMP
- FIRE HYDRANT

MAINTENANCE OF TRAFFIC LEGEND:

- DRUM (PER INDOT SPEC. 801.09) SPACED AS NOTED WITH TYPE C STEADY BURN LIGHTS
- ADVANCED WARNING SIGN
- END OF ROAD WORK SIGN

SIGNAGE SCHEDULE:

- | | |
|----|--|
| 2 | XW20-1A (36x36) ROAD CONSTRUCTION AHEAD |
| 2 | G20-2 (36x18) END ROAD WORK |
| 43 | DRUM (PER INDOT SPEC 801.09) SPACED AS NOTED |

NOTES:

- DURING THE COURSE OF CONSTRUCTION, ONE LANE REDUCTION WILL BE ALLOWED BETWEEN THE HOURS OF 8AM TO 4PM. THE LANE MUST BE REOPENED AT THE END OF EACH DAY THAT IT IS CLOSED.
- THE BARRICADES SHALL BE MOVED TO THE EDGE OF PAVEMENT AT TIMES OF NO CONSTRUCTION TO ALLOW FOR UNOBSTRUCTED TRAFFIC FLOW THROUGH THE CONSTRUCTION AREA.
- FENCING AND BARRICADES SHALL BE PLACED SO AS TO ENCOMPASS ANY EXPOSED TRENCH AREA AT TIMES OF NO CONSTRUCTION.
- THE ROAD WORK AHEAD SIGN SHALL ALSO BE COVERED OR TURNED AWAY FROM THE ROADWAY AT TIMES OF NO CONSTRUCTION.
- THE MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS OF THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD DETOUR SHEETS AND THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND ALL SUBSEQUENT REVISIONS.
- ANY DROP OFF ADJACENT TO THE TRAVEL LANE WHICH EXCEEDS 4" MUST HAVE TYPE II DRUMS WITH TYPE 'A' FLASHERS SPACED EVERY 100'
- DURING THE COURSE OF CONSTRUCTION FOR THIS PROJECT, THE CONTRACTOR SHALL KEEP A 10' WIDE LANE OPEN AT ALL TIMES.
- THE TRAFFIC MAINTENANCE PLAN SHALL MEET ALL REQUIREMENTS OF THE INDOT WORK ZONE SAFETY MANUAL, CURRENT ADDITION. CONTRACTOR TO FOLLOW GUIDELINES REFERENCED IN THE INDOT WORK ZONE TRAFFIC CONTROL HANDBOOK.

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DEERFIELD SECTION 1

SHEET NO.

C410

PROJECT NO.

W21.0353

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
MAINTENANCE OF TRAFFIC PLAN
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

APPROVAL PENDING
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APPROVAL PENDING
NOT FOR CONSTRUCTION

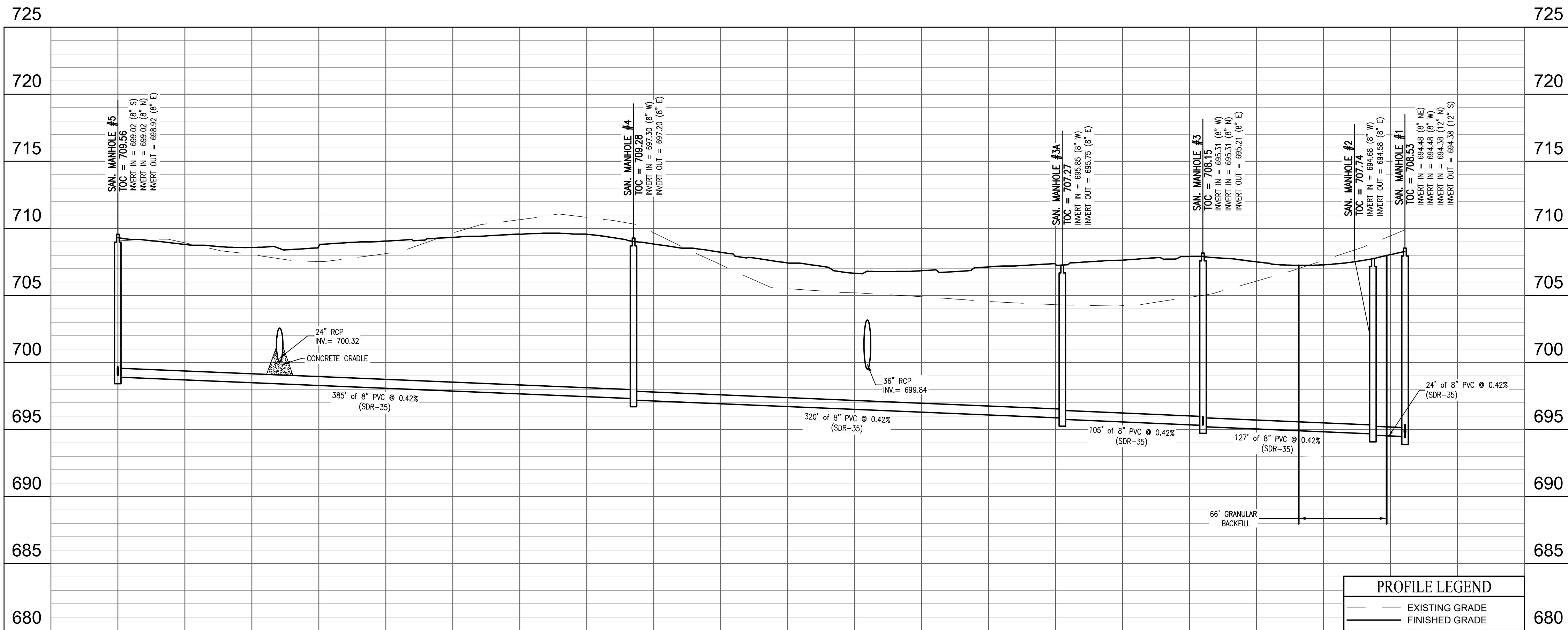
REVISIONS AND ISSUES

PROJECT NO: W21.0353
DWG NAME: C410.MDT Plan
DESIGNED BY: JSS
DRAWN BY: MEN
CHECKED BY: JP
DATE: 05-03-2022

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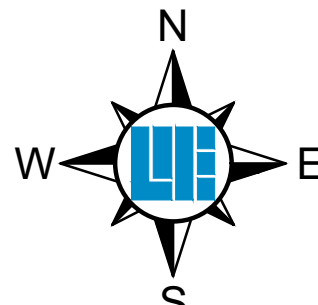
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DATE: 08/11/2021
DRAWN BY: J. HARRIS
PLOT: 08/11/2021



- LEGEND: PROPOSED CONDITIONS**
- RIGHT-OF-WAY LINE
 - PROPOSED STORM SEWER LINE
 - SWALE
 - SSD
 - PROPOSED SANITARY SEWER LINE
 - SANITARY SEWER MANHOLE
 - PROPOSED WATER LINE
 - STORM BEEHIVE INLET
 - STORM INLET
 - TOP OF CASTING
 - INVERT
 - REINFORCED CONCRETE PIPE
 - MANHOLE
 - STRUCTURE
 - D.E.
 - DRAINAGE EASEMENT
 - D.U.&S.S.E.
 - DRAINAGE UTILITY AND SANITARY SEWER EASEMENT
 - DRAINAGE, UTILITY AND SEWER EASEMENT
 - CONCRETE END SECTION
 - MATCH EXISTING
 - TYPICAL
 - PROPOSED
 - EXISTING
 - R.
 - V.W.
 - ROW
 - B-B
 - PAD (TYP. PAD SIZE 60'X70')
 - B.S.L.
 - ADA RAMP
 - FIRE HYDRANT

SANITARY SEWER NOTES

- THE CONTRACTOR SHALL CONTACT APPLICABLE UNDERGROUND-PLANT PROTECTION/LOCATION SERVICE AT LEAST 72 HOURS PRIOR TO ANY WORK.
- THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR ENGINEER IF UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES, PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
- THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION IS THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY OWNERS TO VERIFY ANY AND ALL FEES ASSOCIATED WITH THE INSTALLATION OF UTILITIES.
- ALL CONSTRUCTION ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH O.S.H.A. STANDARDS FOR WORKER SAFETY.
- ANY PART OF SANITARY TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVEMENT TO BE BACKFILLED WITH GRANULAR MATERIAL.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, AND PAVEMENTS, AS RELATED TO THEIR WORK. NOTIFY ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
- CLEARANCE BETWEEN STORM / SANITARY SEWER SYSTEMS AND DOMESTIC/FIRE LINE SERVICE, SHALL BE MAINTAINED AT 10' HORIZONTAL AND 18" VERTICAL.
- CONTRACTOR TO INSTALL CONCRETE GRADES AT PIPE CROSSINGS WHEN THE VERTICAL SEPARATION AS MEASURED FROM THE EXTERIOR OF THE PIPES, BETWEEN SANITARY SEWERS, WATER MAINS AND STORM SEWERS IS 18" OR LESS.
- SANITARY SEWER MAINS WITHIN 10' OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO ITS CONDITION PRIOR TO CONSTRUCTION.
- WHEN PERFORMING EXCAVATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.
- COMPACTED "B" BORROW BACK FILL REQUIRED OVER ALL UTILITIES IN PAVED AREAS.
- ALL UTILITY STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS RATED FOR H20 LOADING.
- FOLLOW ALL LOCAL AND STATE CODES IN REFERENCE TO SANITARY SEWER INSTALLATION.
- SANITARY SEWER LATERALS SHALL BE BACKFILLED WITH GRANULAR MATERIAL FOR THE ENTIRE LENGTH OF THE PIPE.
- ALL EXISTING MANHOLES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
- CLEANOUTS ARE REQUIRED WITHIN 18-60 INCHES OF THE BUILDING AND EVERY 100 FEET ALONG THE LATERAL.
- LATERALS STATIONS ARE FROM THE NEAREST DOWNSTREAM MANHOLE.
- REFER TO ASTM D2321 FOR INSTALLATION OF PVC SANITARY SEWER.
- ALL SANITARY SEWER TO HAVE DEFLECTION AND LEAKAGE TESTING AS PER CODE 327 IAC 3-6-19.



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DEERFIELD SECTION 1

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

SANITARY SEWER PLAN AND PROFILE

Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.

C500

PROJECT NO.

W21.0353

REVISIONS AND ISSUES

PROJECT NO:

W21.0353

DWG NAME:

C500 Sanitary Plan

DESIGNED BY:

J. HARRIS

DRAWN BY:

ME

CHECKED BY:

J. HARRIS

DATE:

08-03-2022

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APPROVAL PENDING NOT FOR CONSTRUCTION

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DEERFIELD SECTION 1

RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

SANITARY SEWER PLAN AND PROFILE

Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.

C500

PROJECT NO.

W21.0353

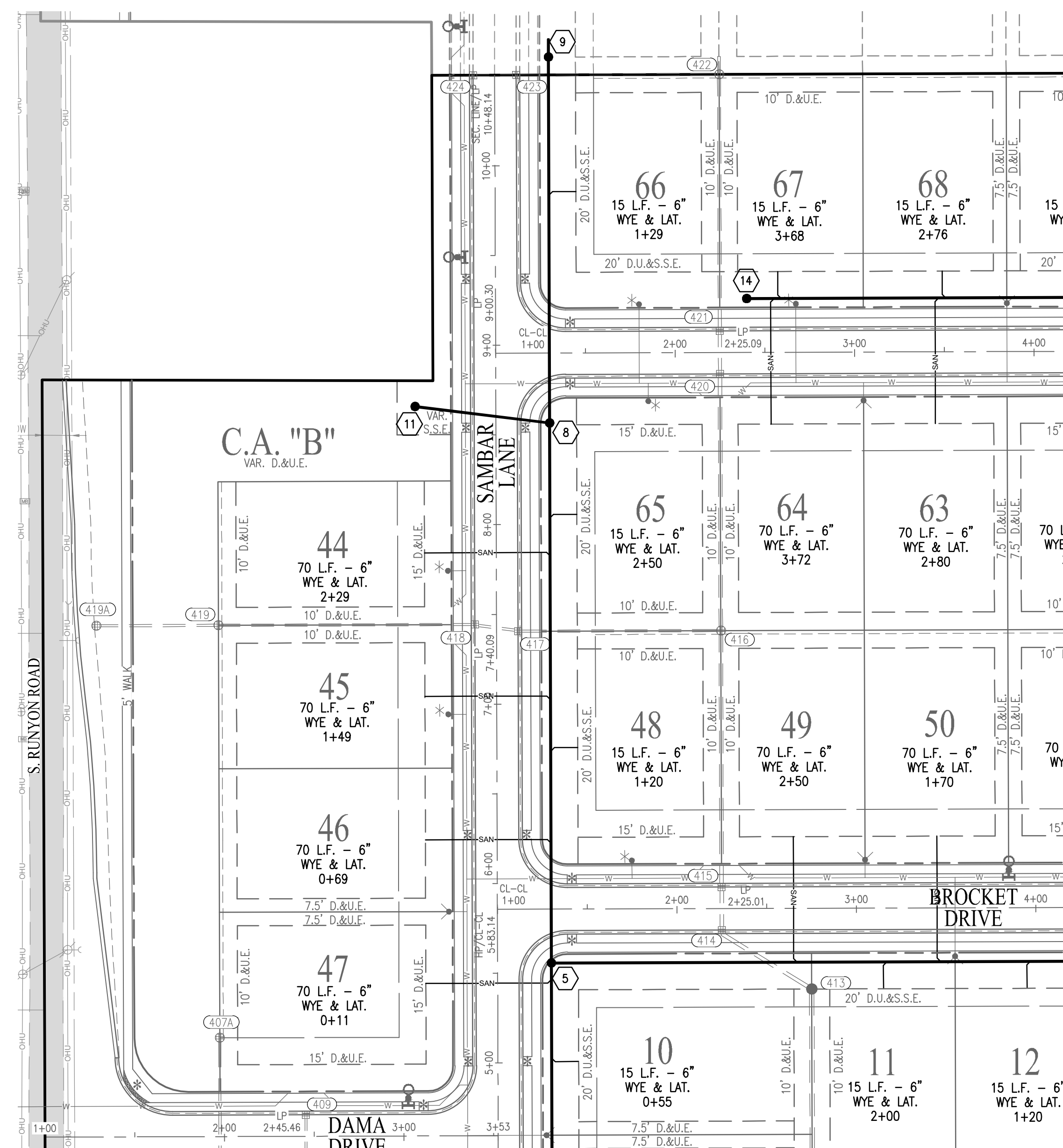
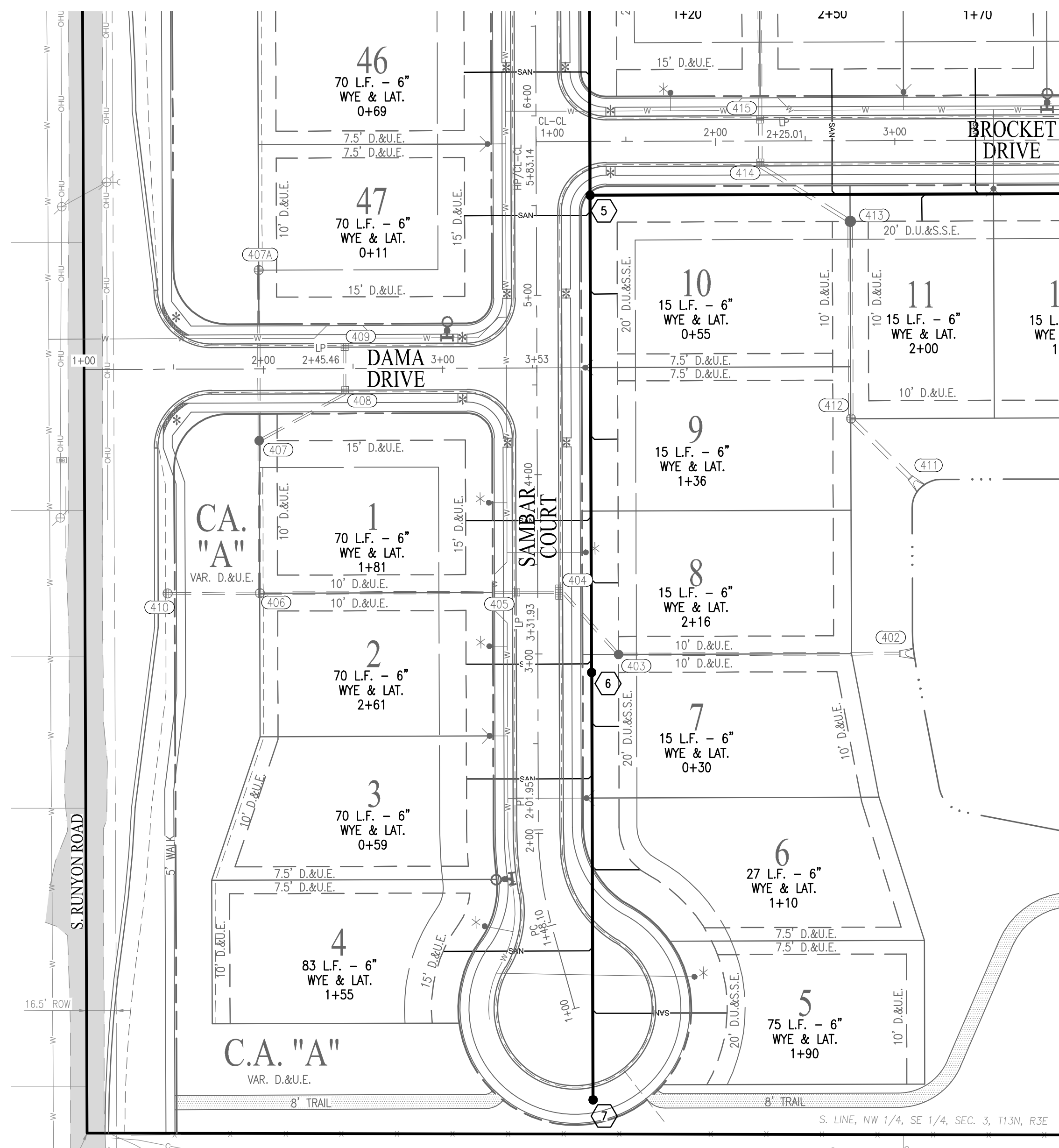
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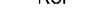
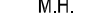
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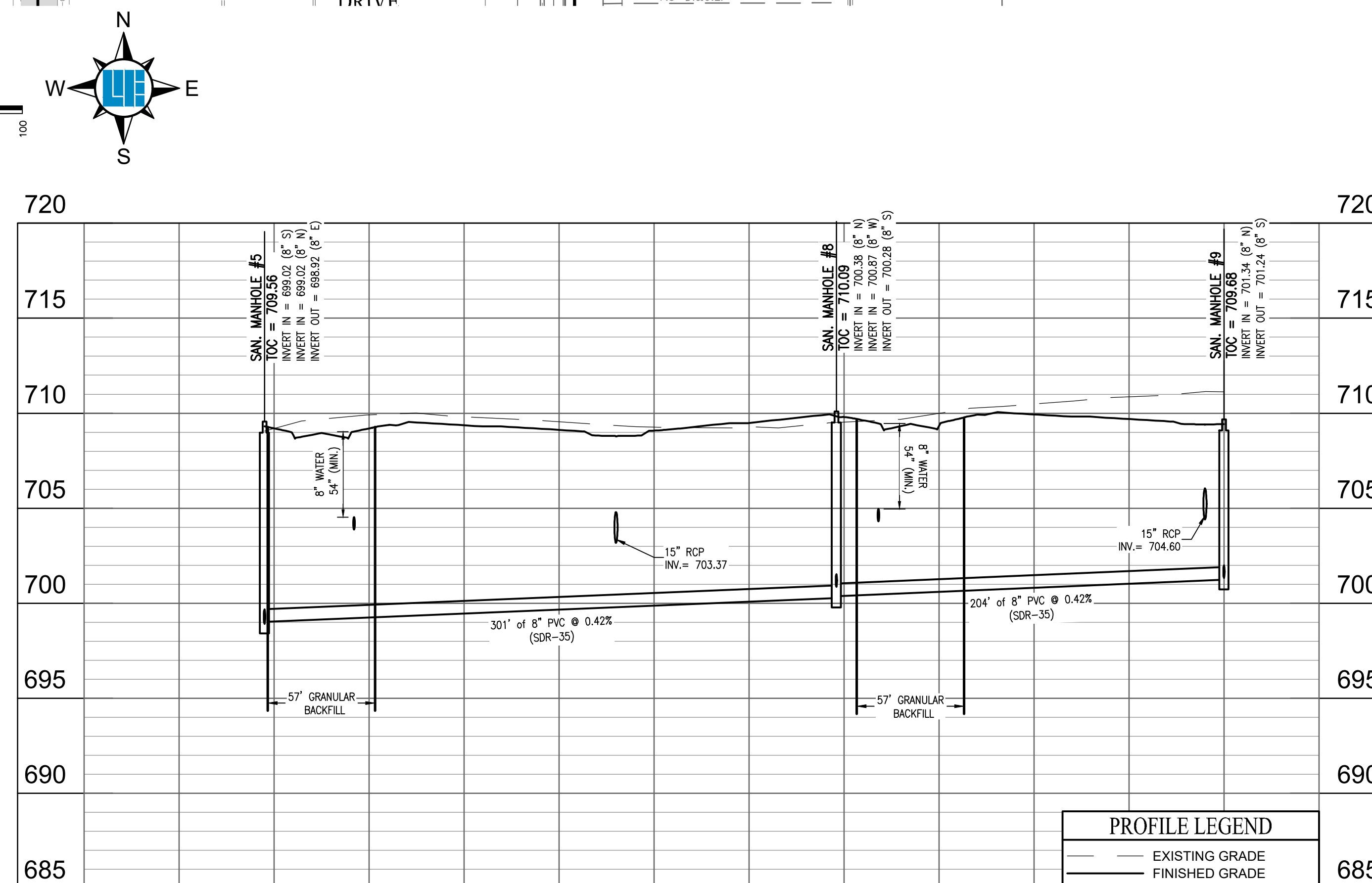
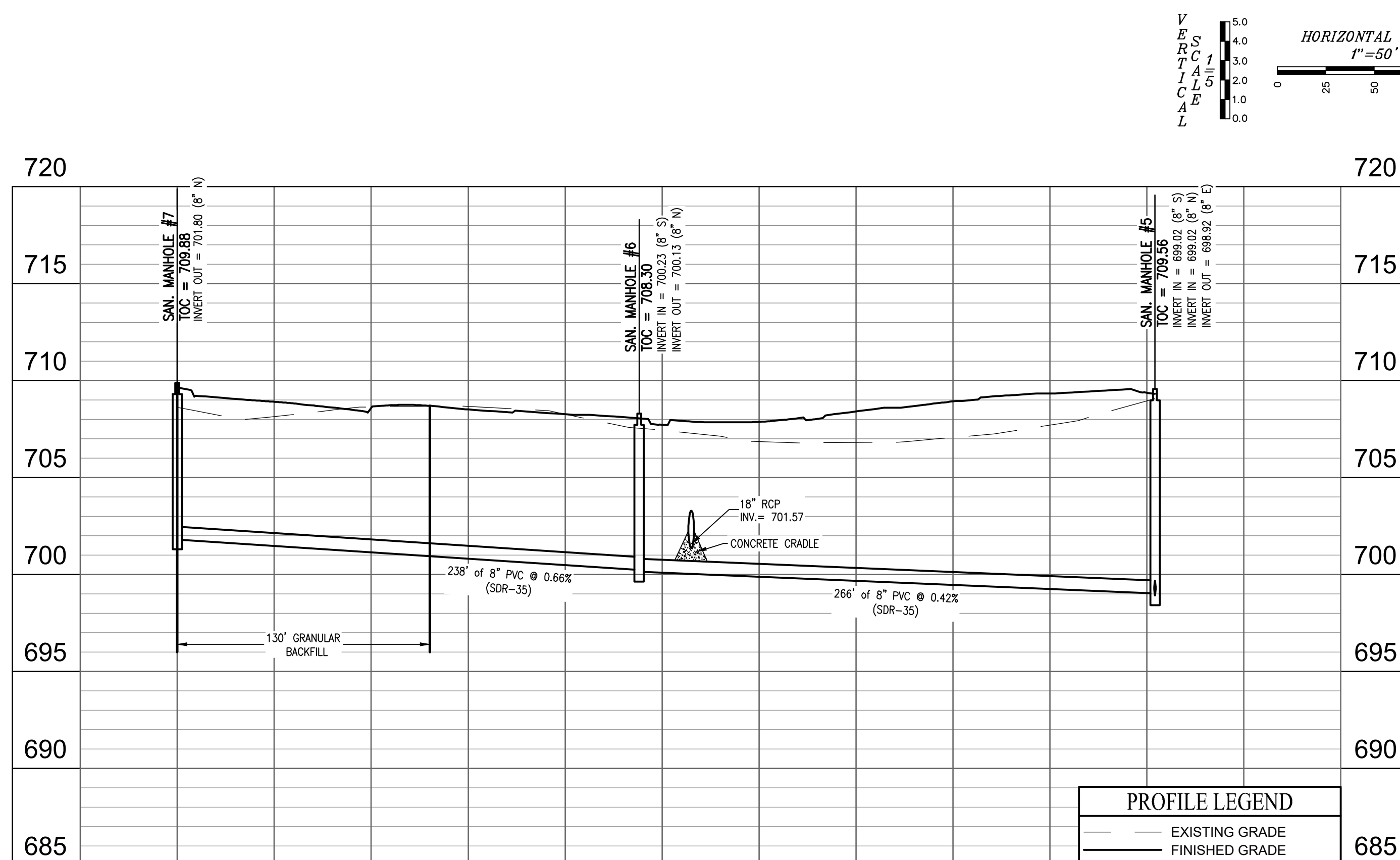
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- LEGEND: PROPOSED CONDITIONS

- | | | |
|---|---|--|
|  | = | RIGHT-OF-WAY LINE |
|  | = | PROPOSED STORM SEWER LINE |
|  | = | SWALE |
|  | = | SSD |
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DEFINITION SECTION 1

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RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD. JOHNSON COUNTY, IN

SANITARY SEWER PLAN AND PROFILE

Section 3 Townships 13 North Range 3 East White River Township Johnson County Indiana

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FOR CONSTRUCTION

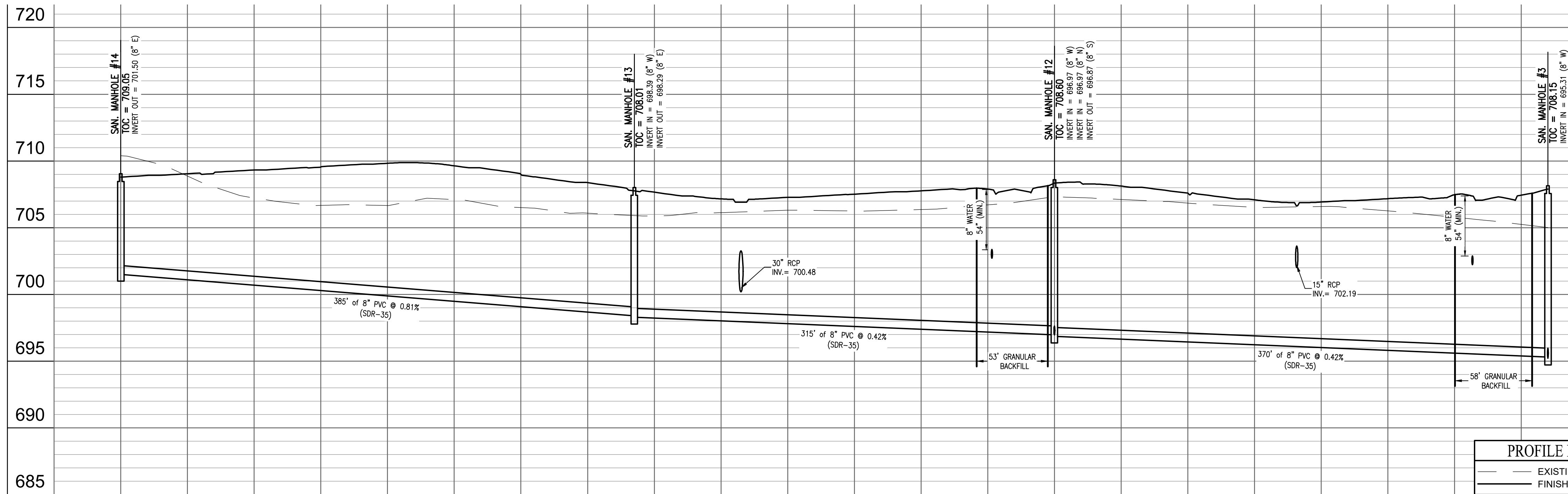
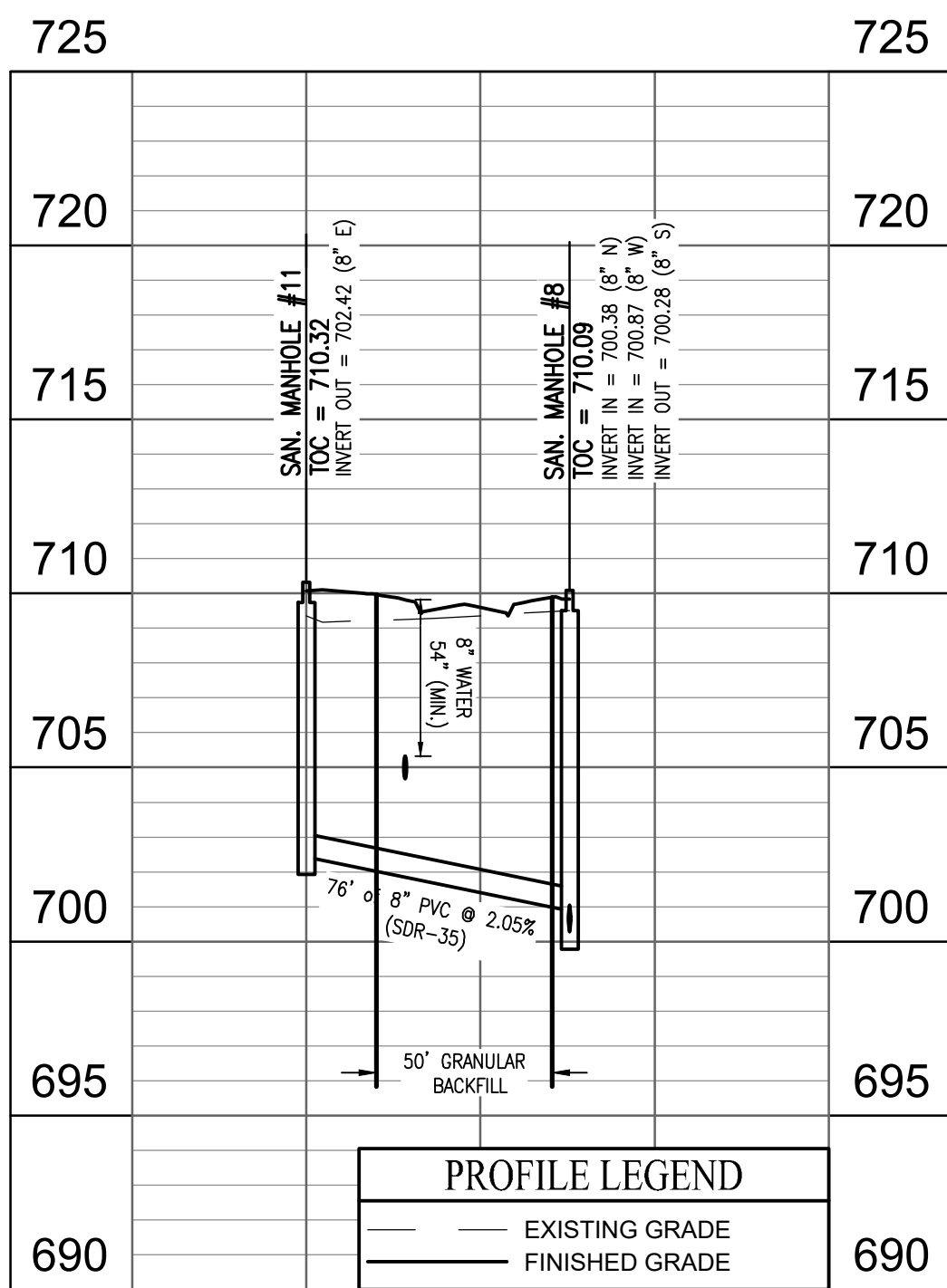
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			DESIGNED BY: JCS
			DRAWN BY: MEN
			CHECKED BY: JP
			DATE:

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LOCATION: H:\2021\W210353\Section 10\Engineering\design\cset\c500 Sanitary PnP.dwg
LAYOUT: C501
DATE/TIME: August 16, 2022 - 12:03pm
PLOT BY: stations



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3. THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES. PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
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5. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY OWNERS TO VERIFY ANY AND ALL FEES ASSOCIATED WITH THE INSTALLATION OF UTILITIES.
6. ALL CONSTRUCTION ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH O.S.H.A. STANDARDS FOR WORKER SAFETY.
7. ANY PART OF SANITARY TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVEMENT TO BE BACKFILLED WITH GRANULAR MATERIAL.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, AND PAVEMENTS, AS RELATED TO THEIR WORK. NOTIFY ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
9. CLEARANCE BETWEEN STORM / SANITARY SEWER SYSTEMS AND DOMESTIC/FIRE LINE SERVICE, SHALL BE MAINTAINED AT 10' HORIZONTAL AND 18" VERTICAL.
10. CONTRACTOR TO INSTALL CONCRETE CRADLES AT PIPE CROSSINGS WHEN THE VERTICAL SEPARATION AS MEASURED FROM THE EXTERIOR OF THE PIPES, BETWEEN SANITARY SEWERS, WATER MAINS AND STORM SEWERS IS 18" OR LESS.
11. SANITARY SEWER MAINS WITHIN 10' OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.
12. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO ITS CONDITION PRIOR TO CONSTRUCTION.
13. WHEN PERFORMING EXCAVATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.
14. COMPACTED "B" BORROW BACK FILL REQUIRED OVER ALL UTILITIES IN PAVED AREAS.
15. ALL UTILITY STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS RATED FOR H20 LOADING.
16. FOLLOW ALL LOCAL AND STATE CODES IN REFERENCE TO SANITARY SEWER INSTALLATION.
17. SANITARY SEWER LATERALS SHALL BE BACKFILLED WITH GRANULAR MATERIAL FOR THE ENTIRE LENGTH OF THE PIPE.
18. ALL EXISTING MANHOLES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
19. CLEANOUTS ARE REQUIRED WITHIN 18-40 INCHES OF THE BUILDING AND EVERY 100 FEET ALONG THE LATERAL.
20. LATERALS STATIONS ARE FROM THE NEAREST DOWNSTREAM MANHOLE.
21. REFER TO ASTM D2321 FOR INSTALLATION OF PVC SANITARY SEWER.
22. ALL SANITARY SEWER TO HAVE DEFLECTION AND LEAKAGE TESTING AS PER CODE 327 IAC 3-6-19.

LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- SHALLE
- SSD
- PROPOSED SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- STORM BEERHIVE INLET
- STORM INLET
- TOP OF CASTING
- INVERT
- REINFORCED CONCRETE PIPE
- MANHOLE
- STRUCTURE
- DRAINAGE EASEMENT
- DRAINAGE, UTILITY AND SANITARY SEWER EASEMENT
- DRAINAGE, UTILITY AND SEWER EASEMENT
- CONCRETE END SECTION
- MATCH EXISTING
- TYP.
- PROPOSED
- EX.
- R.
- V.W.
- ROW
- B-S
- PAD (TYP. PAD SIZE 60'X70')
- B.S.L.
- ADA RAMP
- FIRE HYDRANT

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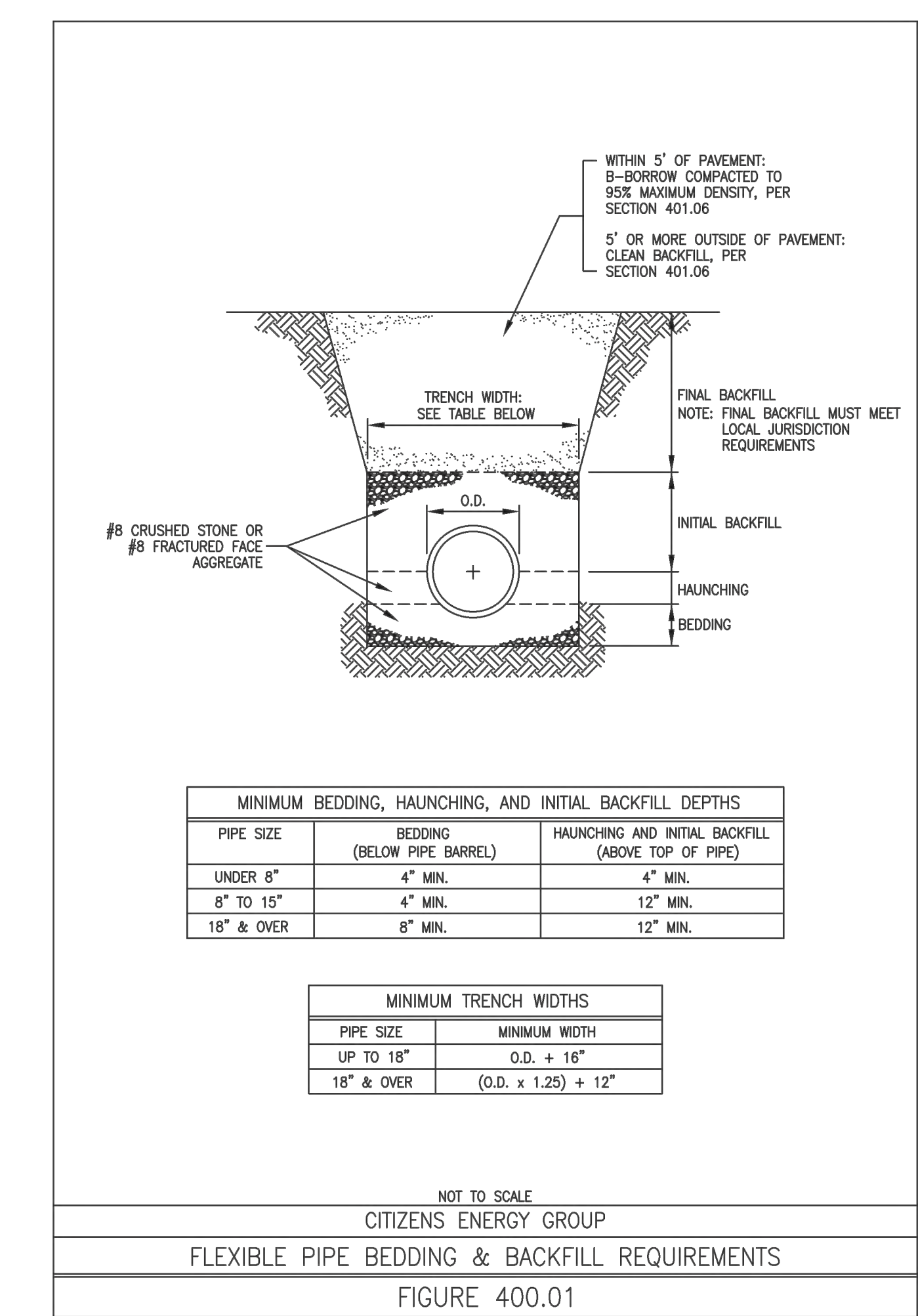
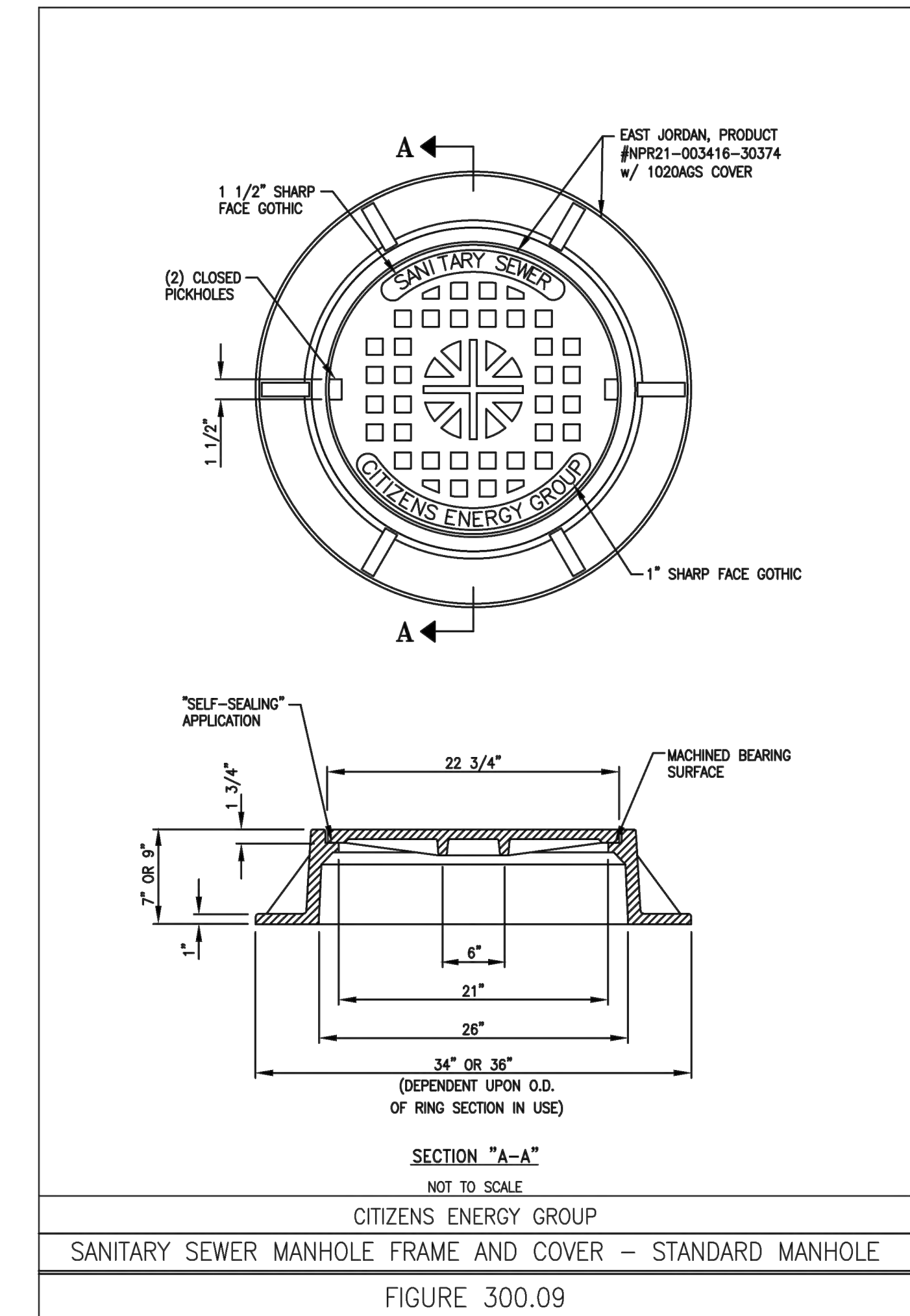
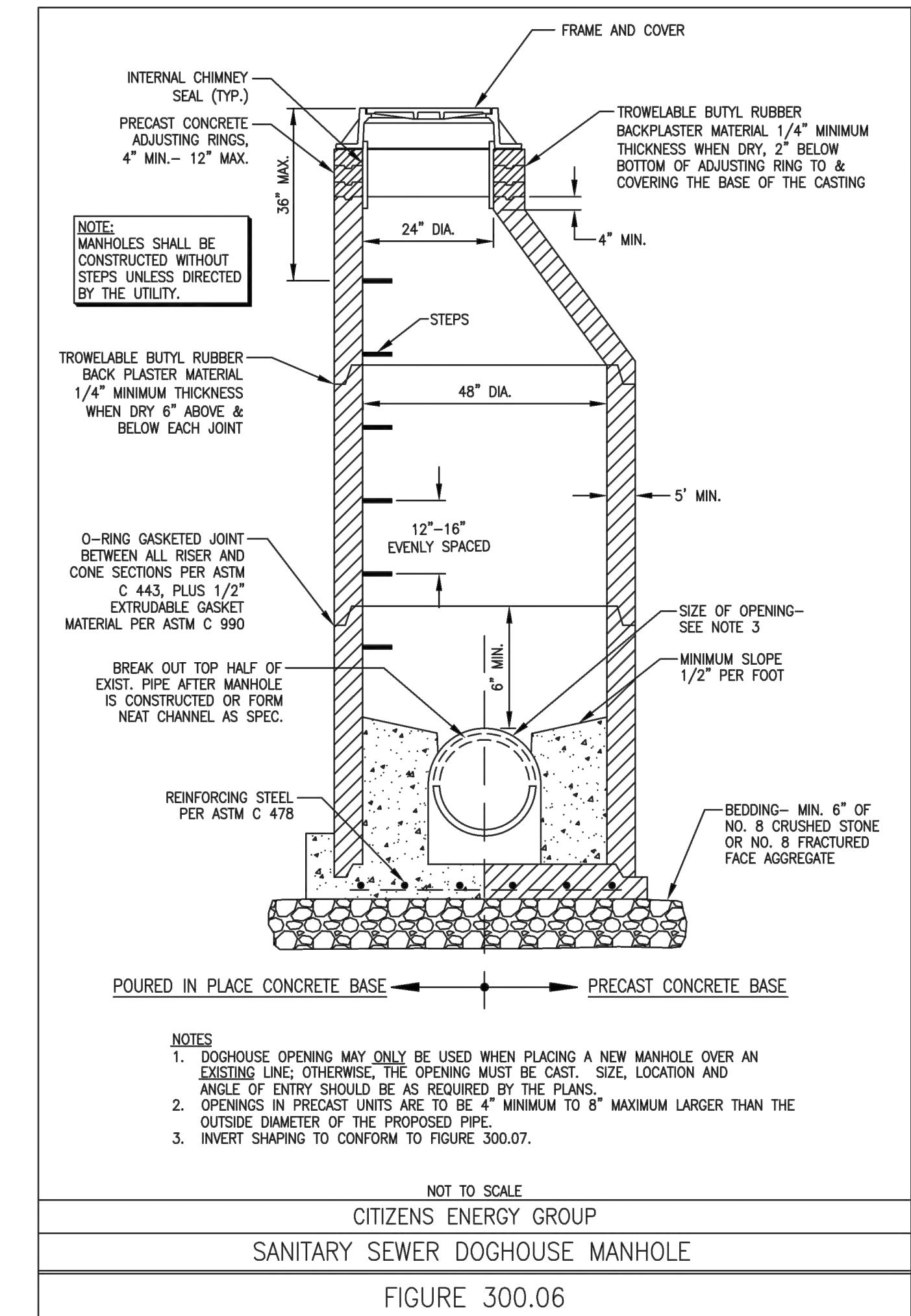
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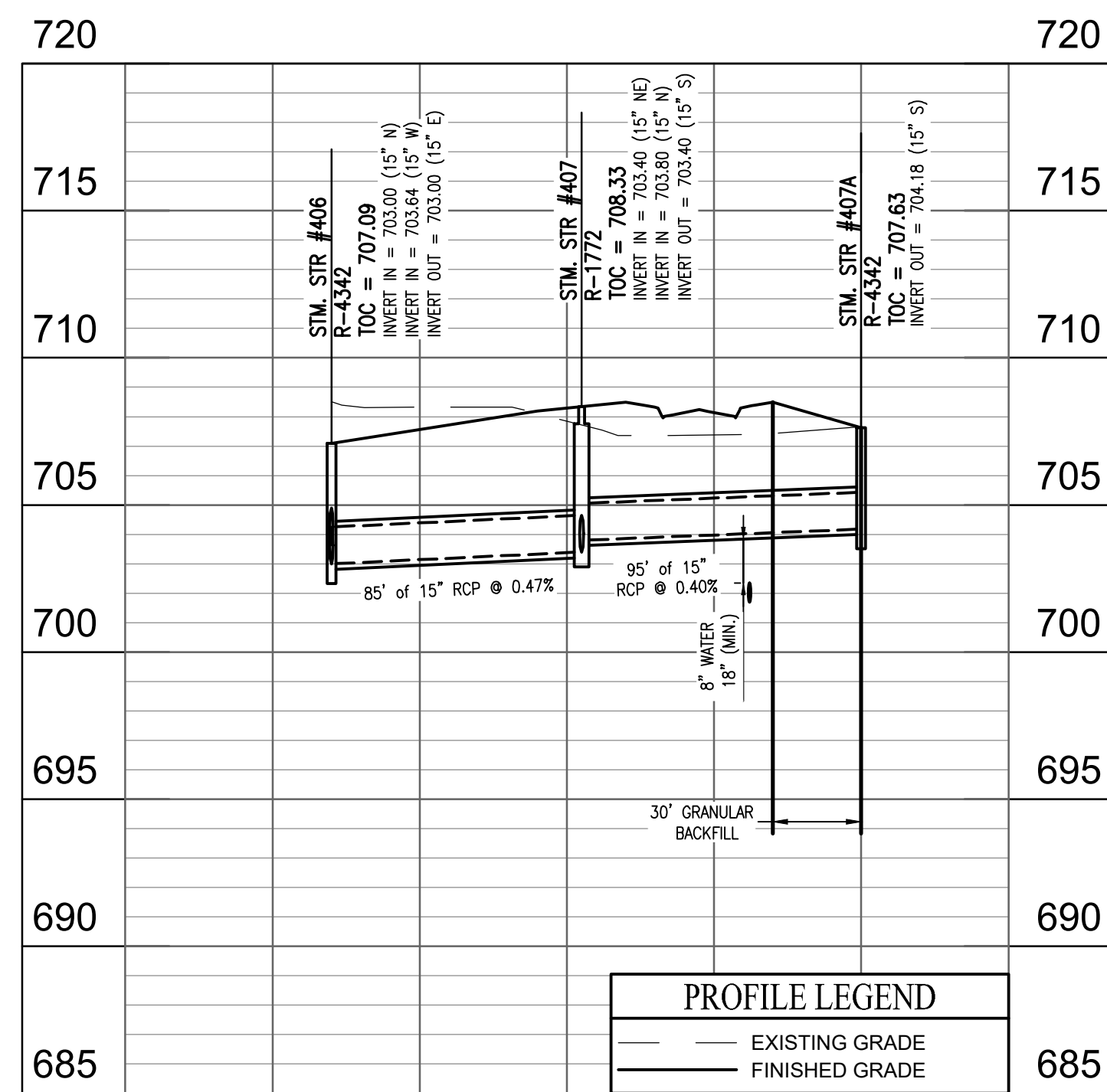
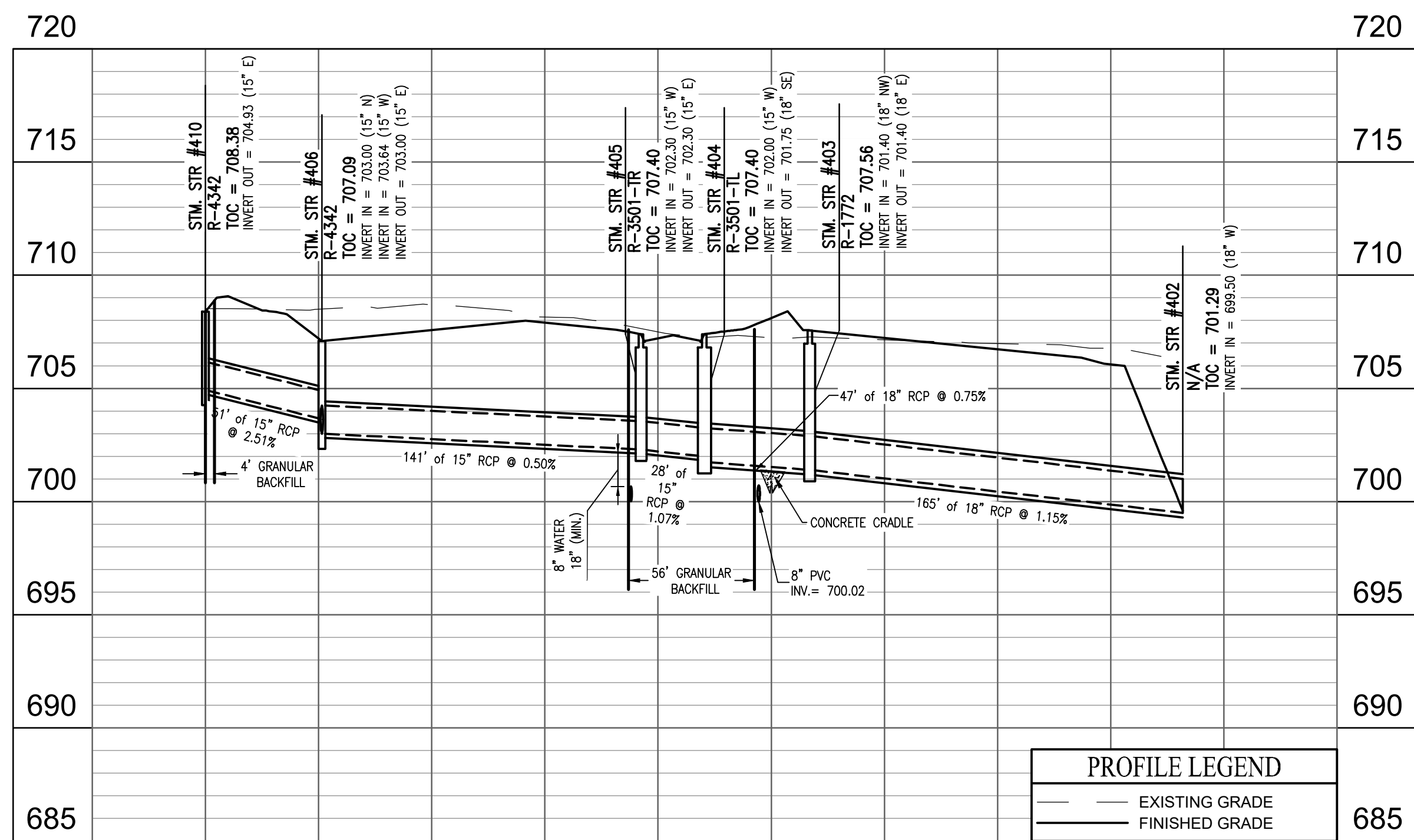
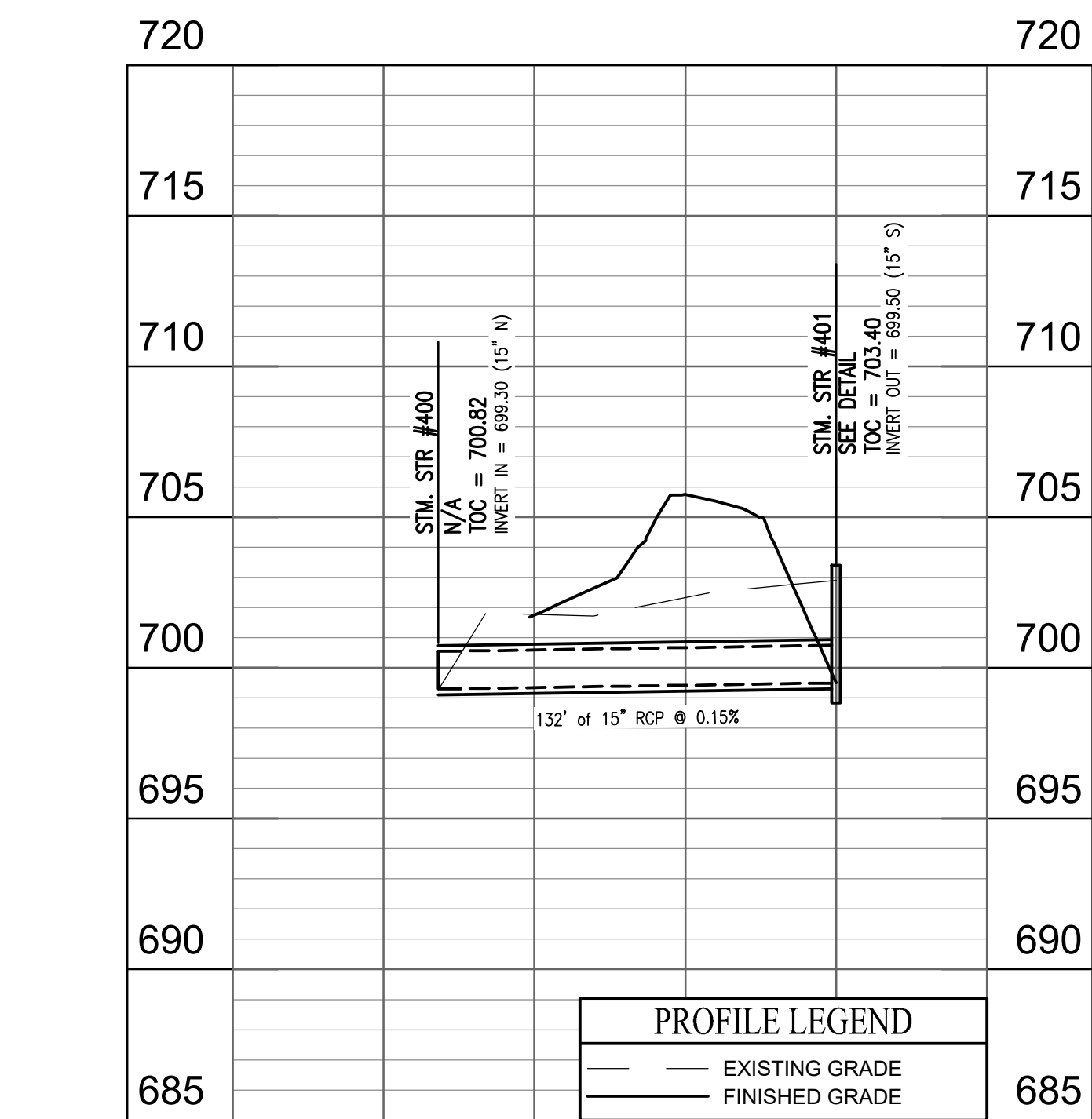
PROJECT NO.	W21.0353
DWG NAME	C502 Sanitary Plan
DESIGNED BY	J.E.
DRAWN BY	J.E.
CHECKED BY	J.P.
DATE	08-03-2022

APPROVAL PENDING NOT FOR CONSTRUCTION

APPROVAL PENDING NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
SANITARY SEWER PLAN AND PROFILE
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana
SHEET NO.
C502
PROJECT NO.
W21.0353





- # STORM SEWER NOTES
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND STORMWATER POLLUTION PREVENTION PLAN.
 - REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS.
 - THE CONTRACTOR SHALL CONTACT APPLICABLE STATE UNDERGROUND LOCATION SERVICE AT LEAST 72 HOURS PRIOR TO ANY WORK AND SHALL CONTACT THE OWNER AND/OR ENGINEER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - THE PLANS SHOW THE LOCATIONS OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES. PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
 - THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, COULDS, SERVICE LINES, AND OTHER FACILITIES WITHIN THE CONSTRUCTION LIMITS. 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.
 - THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITIES AND VERIFY ANY AND ALL FEES ASSOCIATED WITH THE INSTALLATION OF ALL UTILITIES.
 - ALL CONSTRUCTION ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH O.S.H.A. STANDARDS FOR WORKER SAFETY.
 - ANY PART OF STORM SEWER TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVEMENT TO BE BACKFILLED WITH GRANULAR MATERIAL.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, SIZES, AND ELEVATIONS OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS AS RELATED TO THEIR WORK. NOTIFY ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
 - MINIMUM CLEARANCE BETWEEN STORM / SANITARY SEWER SYSTEMS AND DOMESTIC/FIRE LINE SERVICE, SHALL BE 10' HORIZONTAL AND 18" VERTICAL.
 - THE CONTRACTOR TO INSTALL CONCRETE CRADLES AT PIPE CROSSING WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWERS, WATER MAINS AND STORM SEWERS IS 18" OR LESS.
 - SANITARY SEWER LINES WITHIN 10', HORIZONTALLY, OF WATER LINES SHALL BE C900 WATER MAIN GRADE PVC.
 - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO ITS CONDITION PRIOR TO CONSTRUCTION.
 - WHEN PERFORMING EXCAVATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.
 - COMPACTED 3" BORROW BACK FILL REQUIRED OVER ALL UTILITIES IN PAVED AREAS.
 - FOLLOW ALL LOCAL AND STATE CODES IN REFERENCE TO STORM SEWER INSTALLATION.
 - ALL EXISTING MANHOLE AND CATCH BASIN GRATES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
 - EXISTING PIPES WITH CONSTRUCTION LIMITS ARE TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
 - ALL STORM PIPE CONNECTIONS AT STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTIONS AT STRUCTURES ARE WATERTIGHT.
 - ALL STORM SEWER STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS RATED FOR H20 LOADING.
 - ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH AND UNIFORMLY POURED MORTAR CHANNEL FROM INVERT TO INVERT OUT.
 - NEW PIPES AND STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS PRIOR TO FINAL TURNOVER TO THE OWNER.
 - IF HOPE PIPE IS SPECIFIED, USE DUAL WALLED, HANCOR HQ, ADS N-12 PIPE OR APPROVED EQUAL.
 - ALL FITTINGS AND ACCESSORIES INCLUDING BUT NOT LIMITED TO END CAPS, CLEANOUTS, REDUCERS, ETC., SHALL BE HDPE MATERIAL, IF SPECIFIED, COMPARABLE WITH STORAGE PIPES.
 - PROVIDE BACKFILL WITH A MINIMUM OF 4" BEDDING MATERIAL OF #8 AGGREGATE COMPACTED IN 8" LIFTS TO 95% MAXIMUM DRY DENSITY.
 - VERIFY EXISTING STORM INVERT ELEVATIONS PRIOR TO STARTING NEW STORM SEWER CONNECTION.

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REVISIONS AND ISSUES	DATE	BY	PROJECT NO.: W21 0353
			DWG NAME
			C005 Storm Pump
			DESIGNED BY: JMS
			DRAWN BY: MEN
			CHECKED BY: Jp
			DATE: 06/06/2008

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DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

SHEET NO.
C600

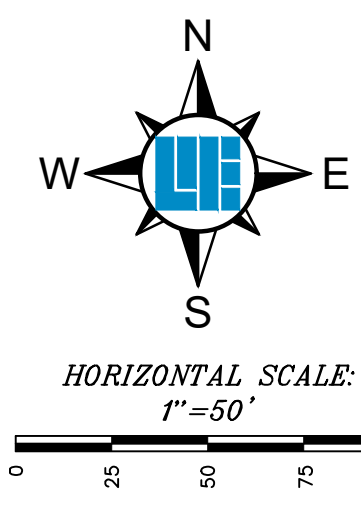
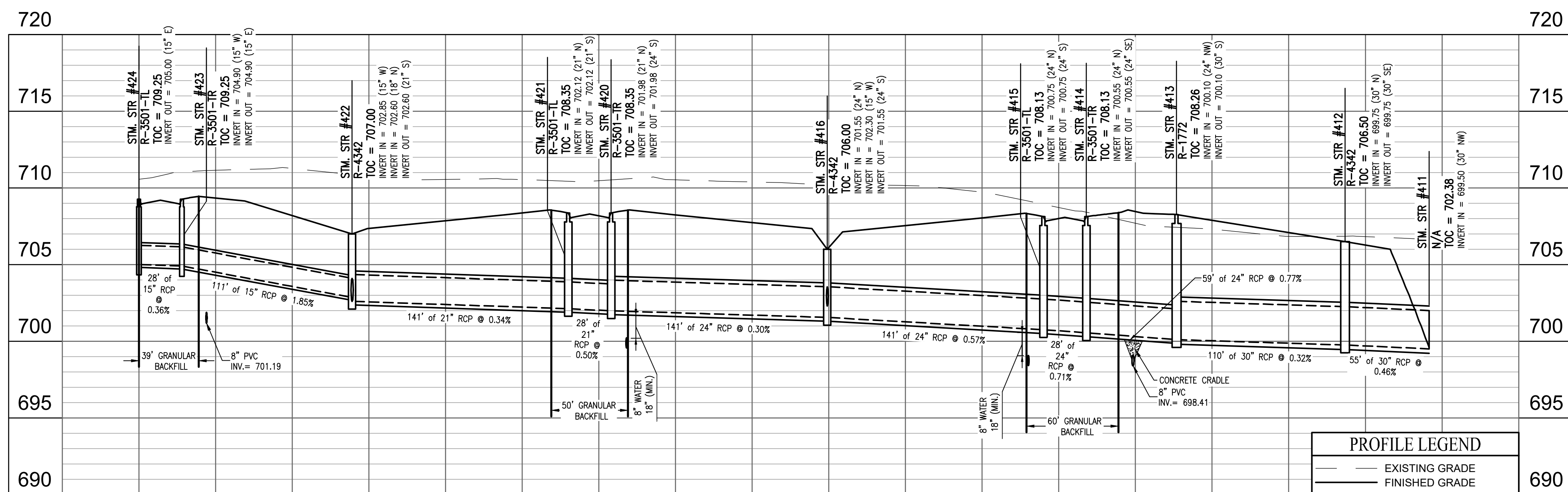
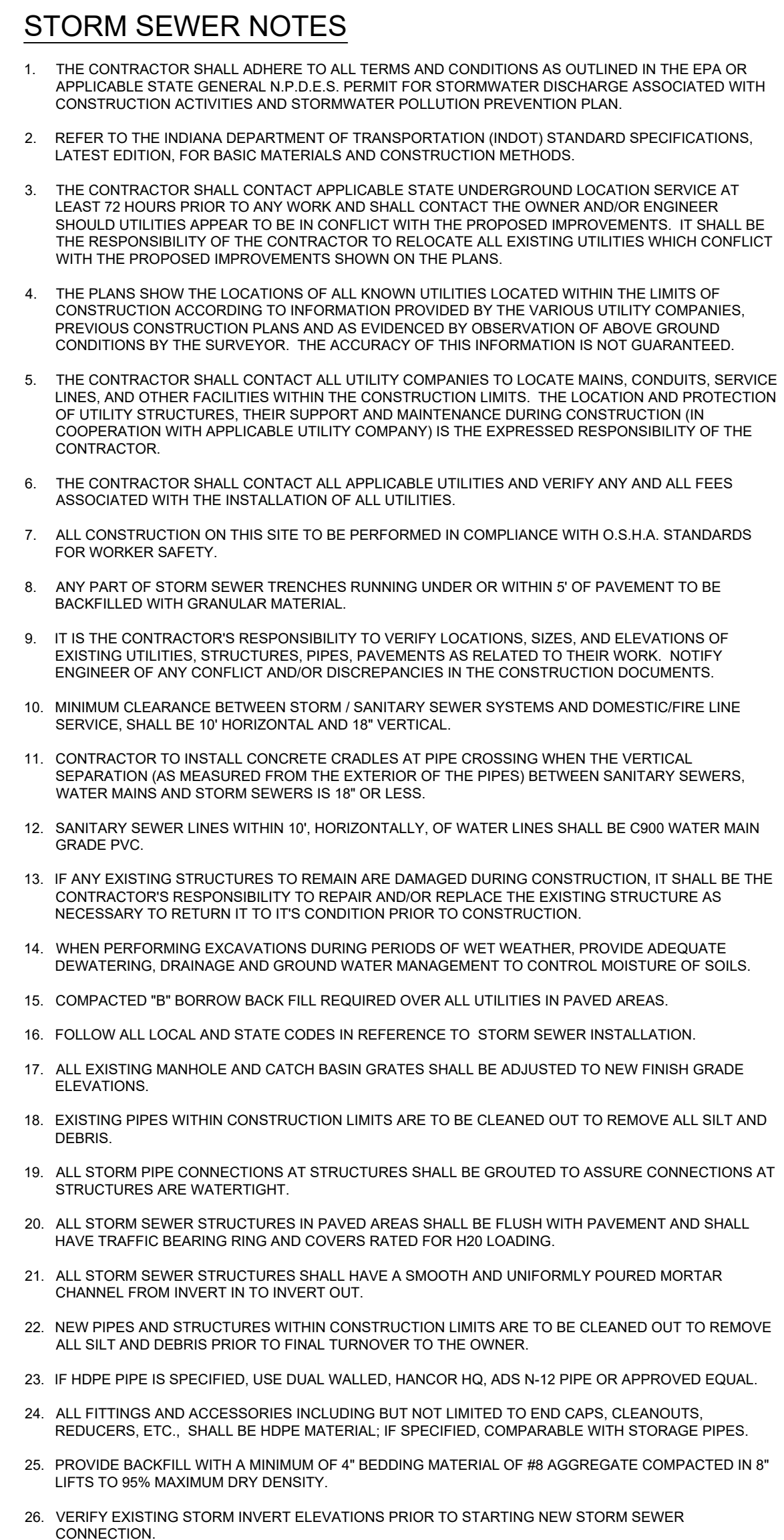
PROJECT NO.
W21.0353



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WITHOUT NOTIFYING THE UNDERGROUND
LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.



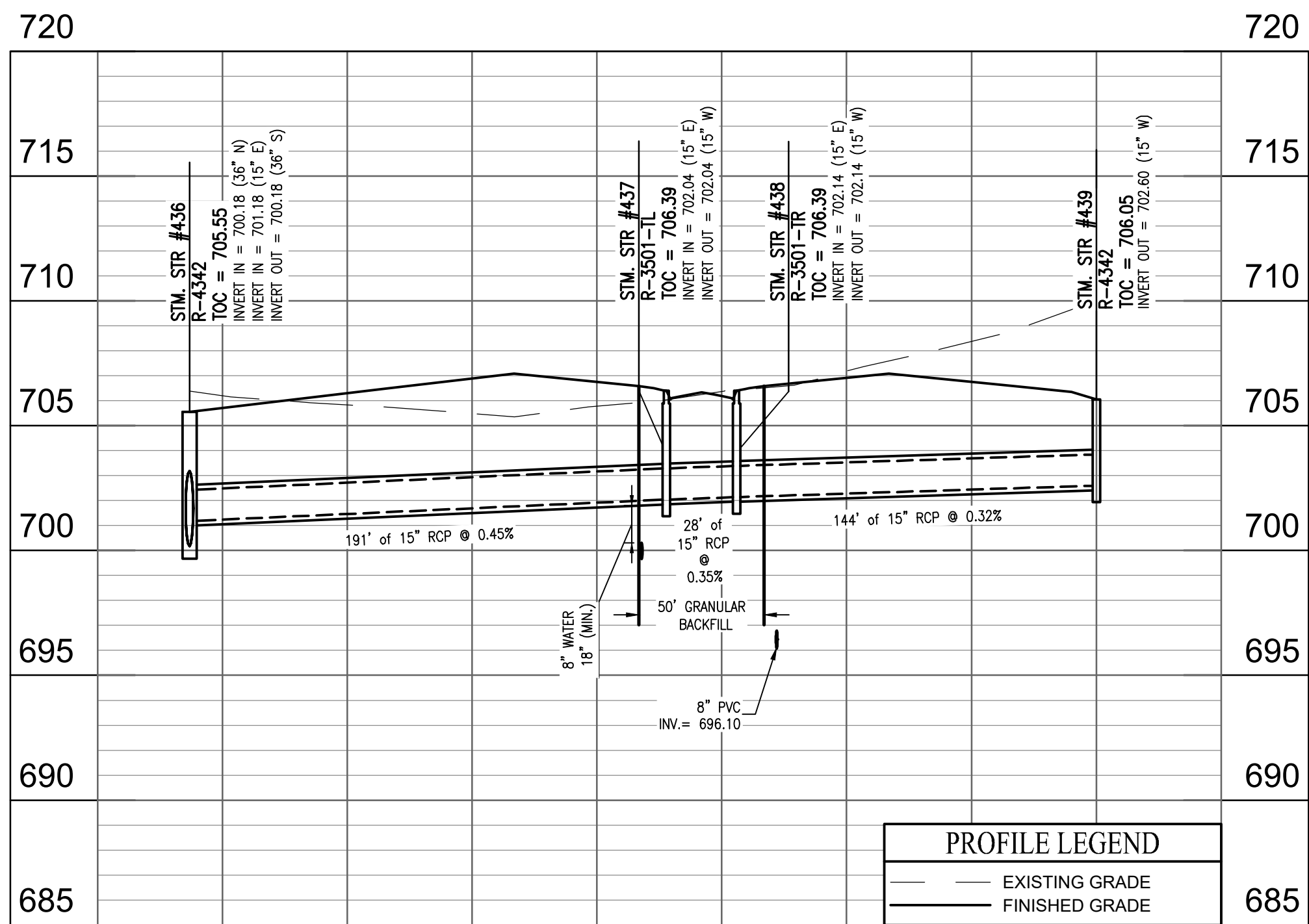
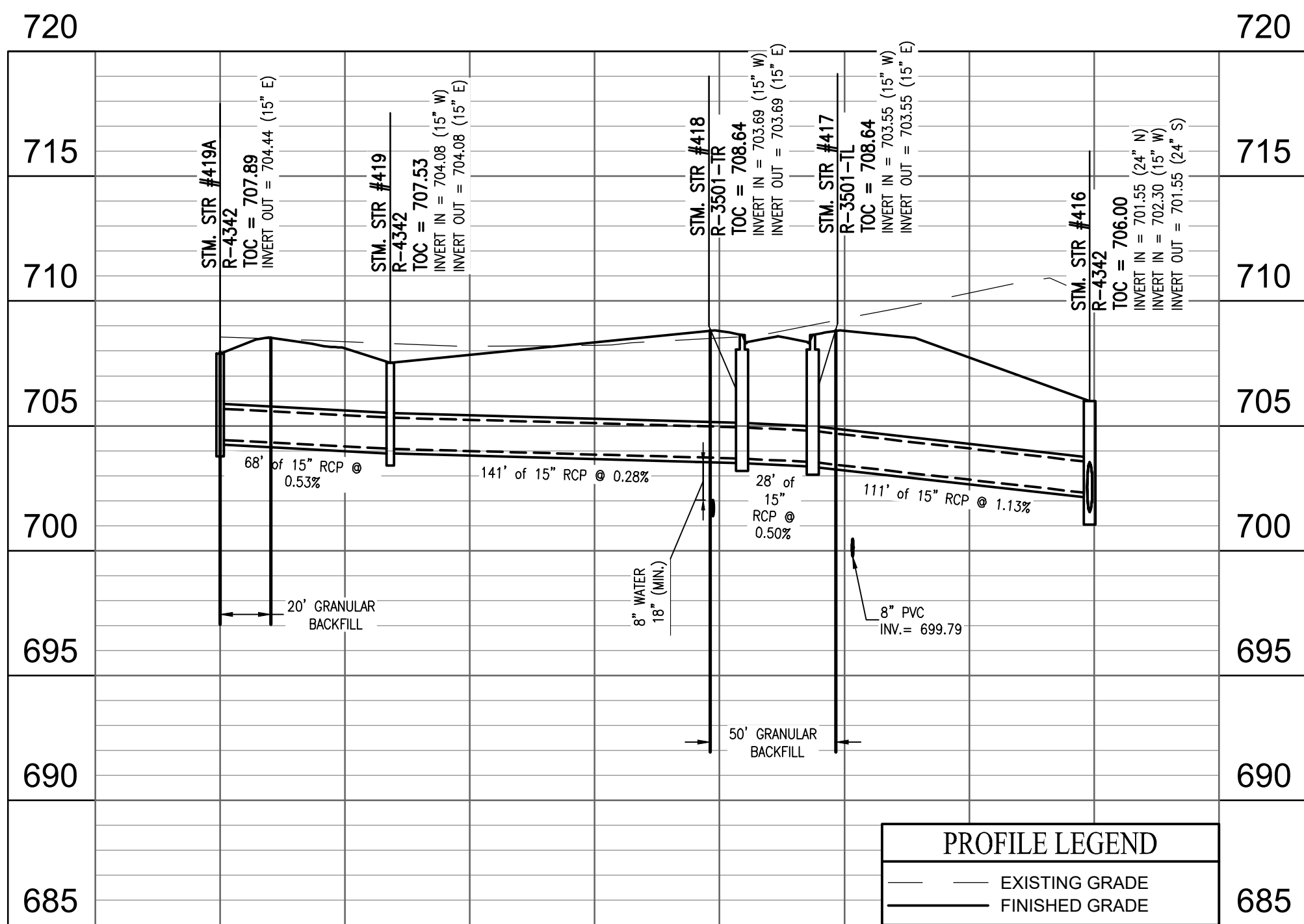
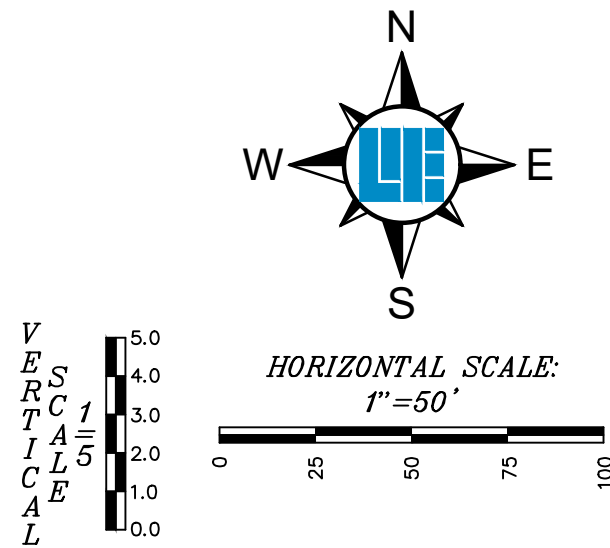
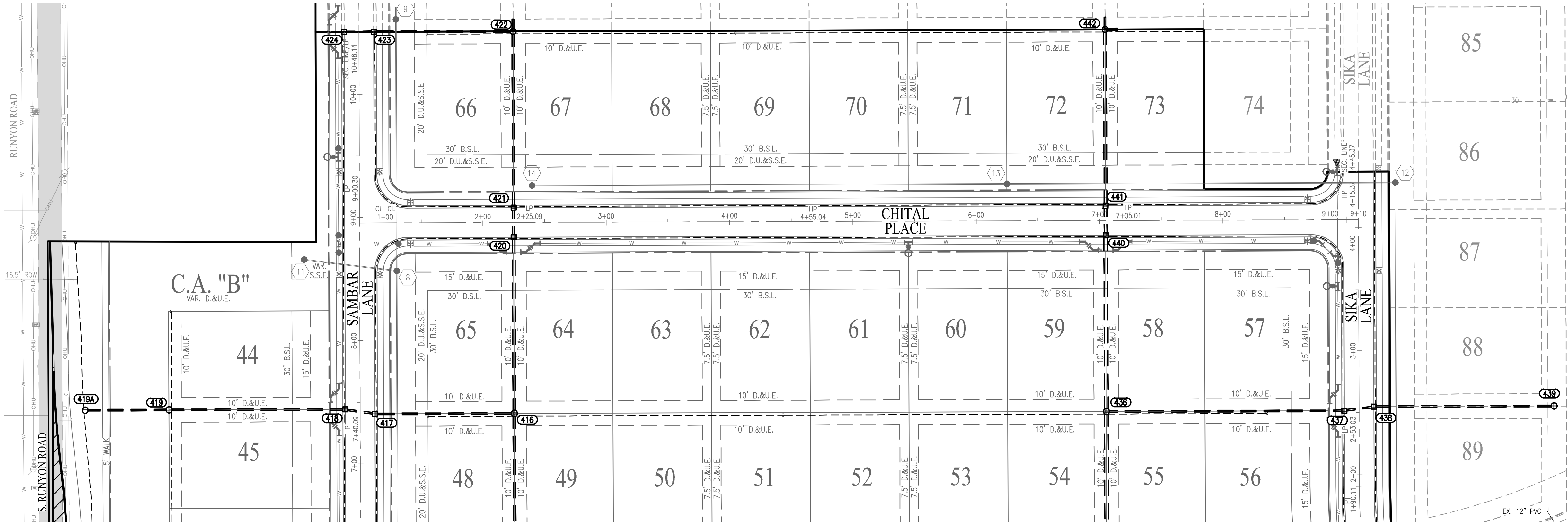
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LOCATION SERVICE TWO (2) WORKING
DAYS BEFORE COMMENCING WORK.

 DEERFIELD SECTION 1 RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN STORM SEWER PLAN AND PROFILE Section 5, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana	REVISIONS AND ISSUES DATE BY PROJECT NO.: W21 10353 DWG. NAME: C600 Storm P&P DESIGNED BY: ENGINEERS DRAWN BY: MEN CHECKED BY: JR DATE: 05-03-2022	WEIHE ENGINEERS Landscaping Civil Engineering Landscaping Architecture Build with confidence	10505 N. College Avenue Indianapolis, Indiana 46280 weihe.net 317 846 - 6611 800 452 - 6408 317 843 - 0546 fax ALLAN H. WEIHE, P.E., U.S. - FOUNDER
	SHEET NO. C601 PROJECT NO. W21 10353		

LOCATION: L:\2021\W21.0353\Section 10\Engineering\dwg\plan\C600 Storm Plan.dwg
DATE: August 18, 2022 - 12:09pm
PLOT: 10/18/2022 10:18 AM
PLOTTER: HP-1000



STORM SEWER NOTES

- THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND STORMWATER POLLUTION PREVENTION PLAN.
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- VERIFY EXISTING STORM INVERT ELEVATIONS PRIOR TO STARTING NEW STORM SEWER CONNECTION.

LEGEND: PROPOSED CONDITIONS

- RIGHT-OF-WAY LINE
- PROPOSED STORM SEWER LINE
- SSD
- PROPOSED SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- STORM BEEHIVE INLET
- STORM INLET
- TOP OF CASTING
- INVERT
- REINFORCED CONCRETE PIPE
- MANHOLE
- STR.
- STRUCTURE
- D.E.
- DRAINAGE EASEMENT
- D.U.&S.E.
- DRAINAGE, UTILITY AND SANITARY SEWER EASEMENT
- D.U.E.
- DRAINAGE, UTILITY AND SEWER EASEMENT
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- TYPICAL
- PROP.
- PROPOSED
- EX.
- EXISTING
- R.
- RADIUS
- V.W.
- VARIABLE WIDTH
- ROW
- RIGHT-OF-WAY
- B-S
- BACK OF CURB
- PAD (TYP. PAD SIZE 60'X70')
- B.S.L.
- BUILDING SETBACK LINE
- ADA RAMP
- FIRE HYDRANT



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PROJECT NO.	W21.0353
DWG NAME	C600 Storm Plan
DESIGNED BY	SSS
DRAWN BY	SSS
CHECKED BY	JP
DATE	05-03-2022

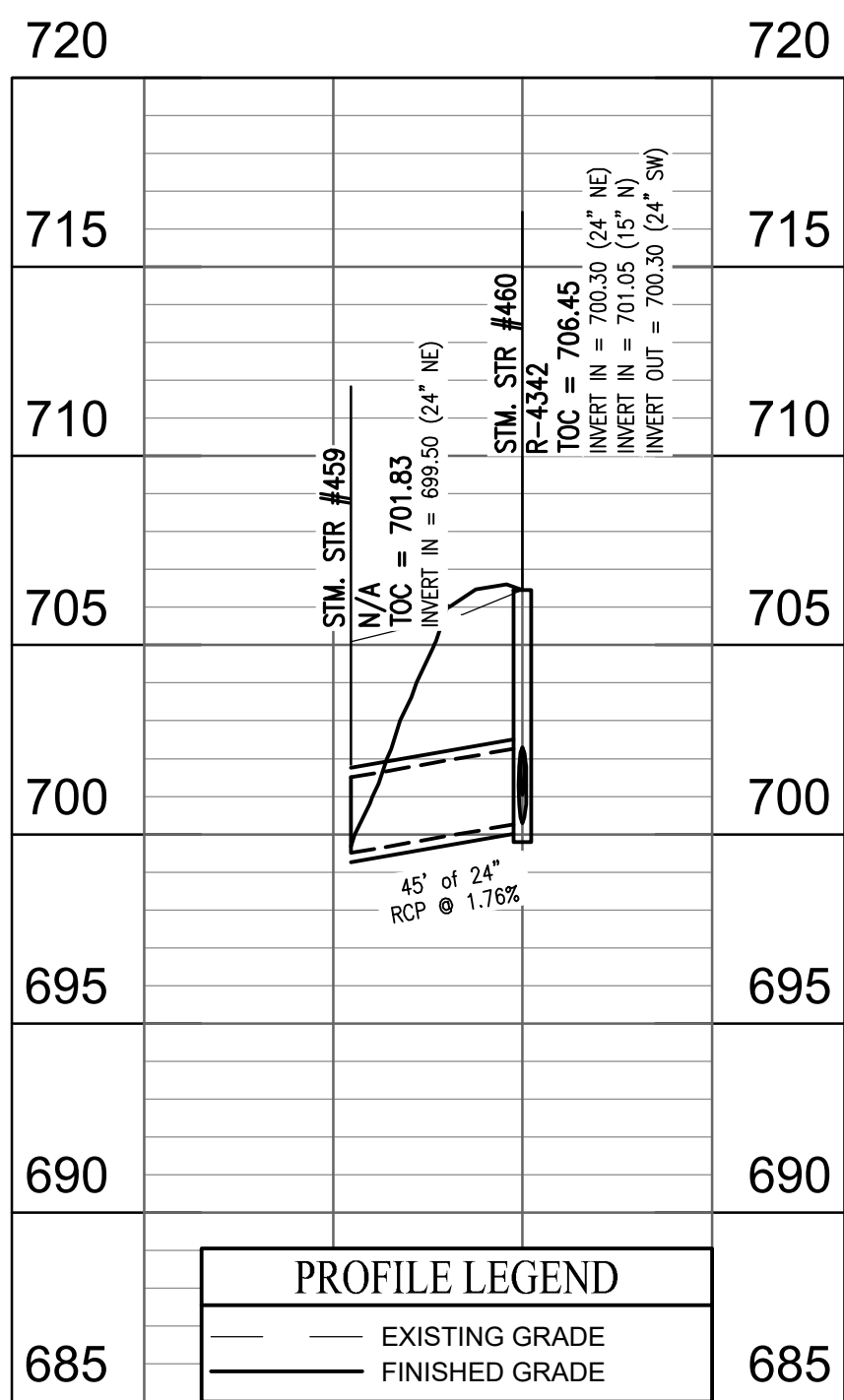
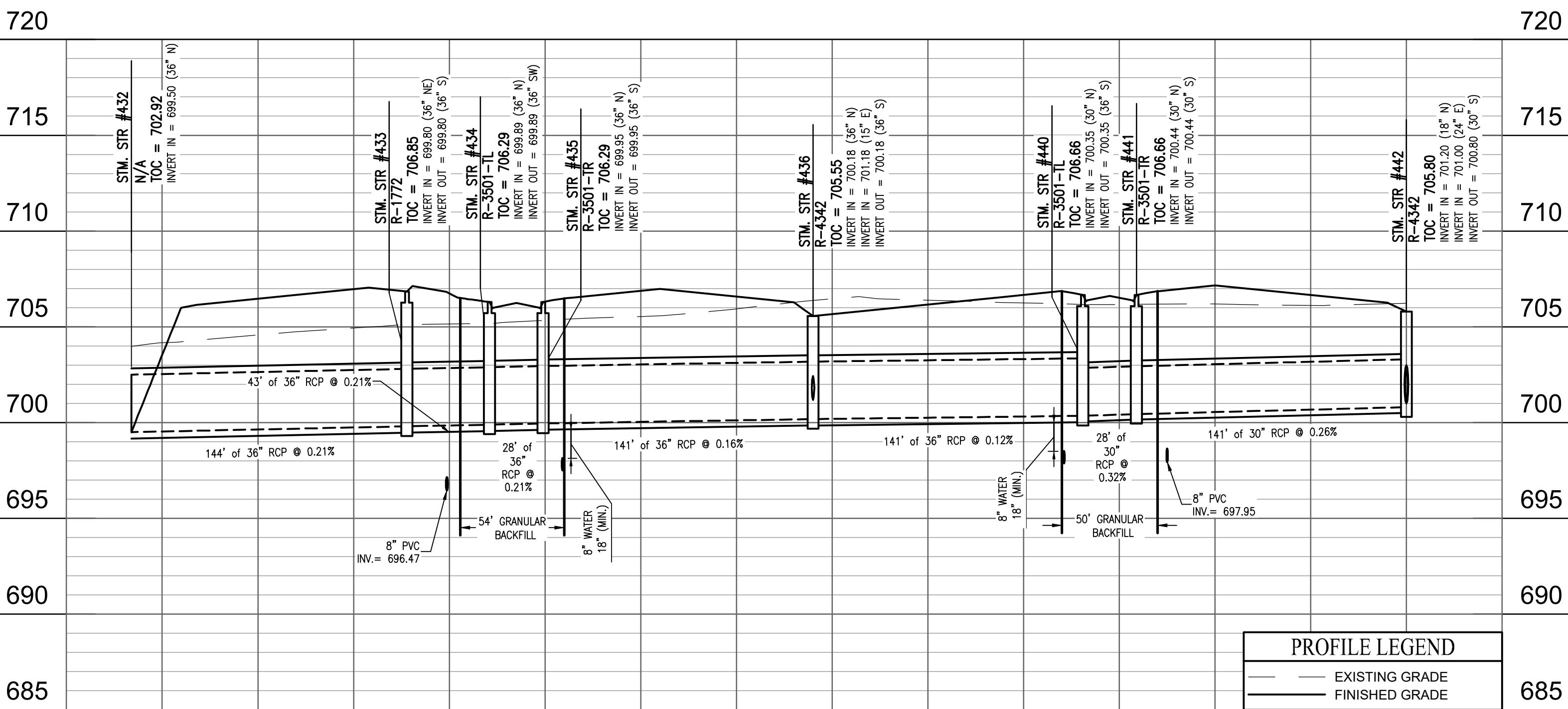
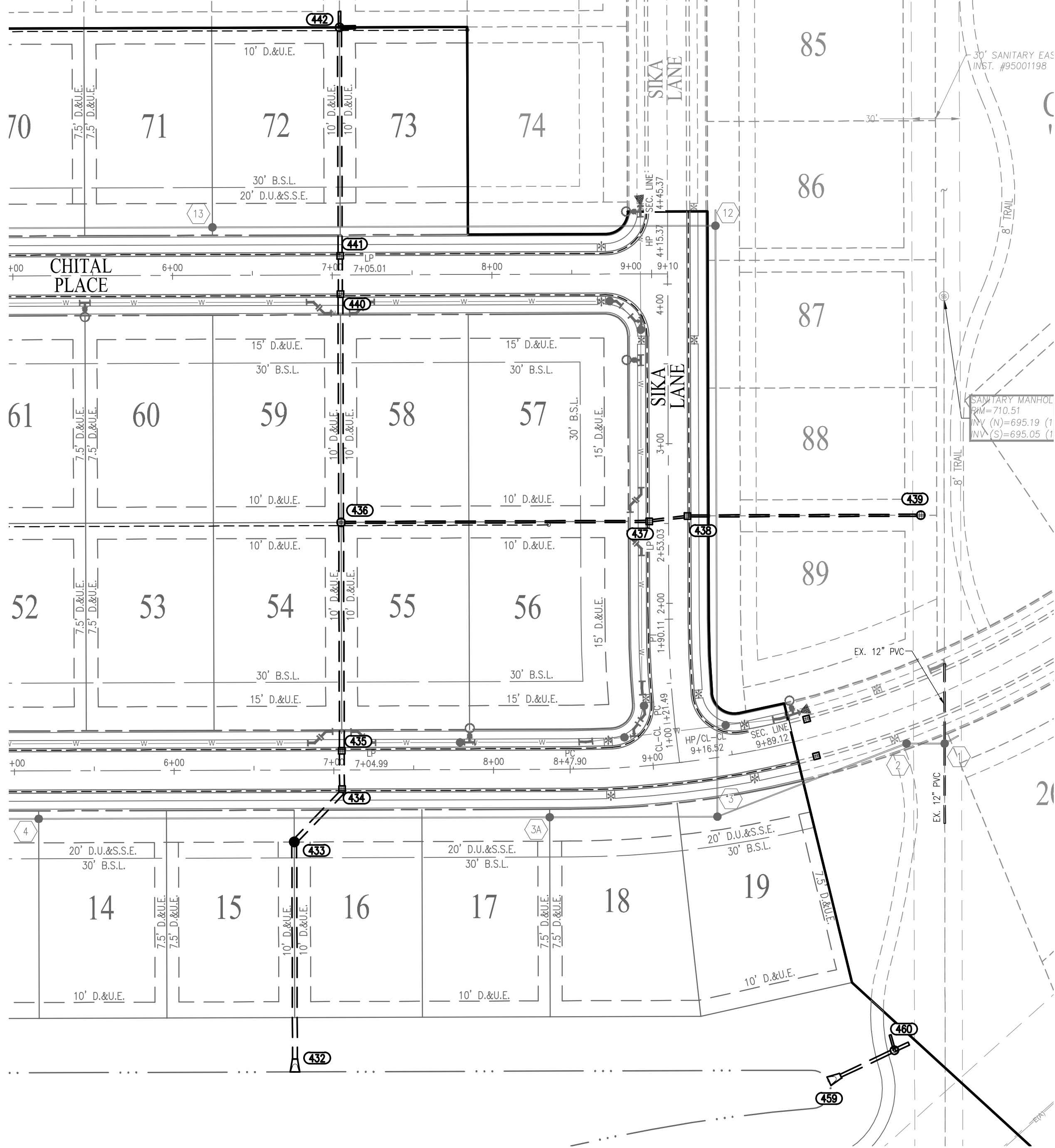
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LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STORM SEWER PLAN AND PROFILE
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana
SHEET NO.
C602
PROJECT NO.
W21.0353

LOCATION: J:\2021\W21.0353\Section 10\Engineering\design\c600 Storm Pipe.dwg
DATE: August 18, 2022 - 12:09pm
PLOTTER: HP - eplot

STORM SEWER STRUCTURE DATA TABLE				
STRUCTURE NUMBER	TOP OF CASTING	STRUCTURE TYPE	CASTING TYPE	INVERT
400	700.82	FLARED END SECTION, 15" DIA.	N/A	INV IN (N)= 699.30 (15" RCP)
401	703.40	OUTLET CONTROL STRUCTURE, 24 X 24	SEE DETAIL	INV OUT (S)= 699.50 (15" RCP)
402	701.29	FLARED END SECTION, 18" DIA.	N/A	INV IN (W)= 699.50 (18" RCP)
403	707.56	48" DIA. MANHOLE	R-1772	INV IN (NW)= 701.40 (18" RCP) INV OUT (E)= 701.40 (18" RCP)
404	707.40	DOUBLE CURB INLET, 60" DIA.	R-3501-TL	INV IN (W)= 702.00 (15" RCP) INV OUT (SE)= 701.75 (18" RCP)
405	707.40	CURB INLET, 48" DIA.	R-3501-TR	INV IN (W)= 702.30 (15" RCP) INV OUT (E)= 702.30 (15" RCP)
406	707.09	BEEHIVE INLET, 24 X 24	R-4342	INV IN (N)= 703.00 (15" RCP) INV IN (W)= 703.64 (15" RCP) INV OUT (E)= 703.00 (15" RCP)
407A	707.63	BEEHIVE INLET, 24 X 24	R-4342	INV OUT (S)= 704.18 (15" RCP)
407	708.33	48" DIA. MANHOLE	R-1772	INV IN (NE)= 703.40 (15" RCP) INV IN (N)= 703.80 (15" RCP) INV OUT (S)= 703.40 (15" RCP)
408	707.99	CURB INLET, 48" DIA.	R-3501-TL	INV IN (N)= 703.64 (15" RCP) INV OUT (SW)= 703.64 (15" RCP)
409	707.99	CURB INLET, 24 X 24	R-3501-TL	INV OUT (S)= 703.74 (15" RCP)
410	708.38	BEEHIVE INLET, 24 X 24	R-4342	INV OUT (E)= 704.93 (15" RCP)
411	702.38	FLARED END SECTION, 30" DIA.	N/A	INV IN (NW)= 699.50 (30" RCP)
412	706.50	BEEHIVE INLET, 60" DIA.	R-4342	INV IN (N)= 699.75 (30" RCP) INV OUT (SE)= 699.75 (30" RCP)
413	708.26	60" DIA. MANHOLE	R-1772	INV IN (NW)= 700.10 (24" RCP) INV OUT (S)= 700.10 (30" RCP)
414	708.13	CURB INLET, 48" DIA.	R-3501-TR	INV IN (N)= 700.55 (24" RCP) INV OUT (SE)= 700.55 (24" RCP)
415	708.13	CURB INLET, 48" DIA.	R-3501-TL	INV IN (N)= 700.75 (24" RCP) INV OUT (S)= 700.75 (24" RCP)
416	706.00	BEEHIVE INLET, 48" DIA.	R-4342	INV IN (N)= 701.55 (24" RCP) INV IN (W)= 702.30 (15" RCP) INV OUT (S)= 701.55 (24" RCP)
417	708.64	CURB INLET, 48" DIA.	R-3501-TL	INV IN (W)= 703.55 (15" RCP) INV OUT (E)= 703.55 (15" RCP)
418	708.64	CURB INLET, 48" DIA.	R-3501-TR	INV IN (W)= 703.69 (15" RCP) INV OUT (E)= 703.69 (15" RCP)
419A	707.89	BEEHIVE INLET, 24 X 24	R-4342	INV OUT (E)= 704.44 (15" RCP)
419	707.53	BEEHIVE INLET, 24 X 24	R-4342	INV IN (W)= 704.08 (15" RCP) INV OUT (E)= 704.08 (15" RCP)
420	708.35	CURB INLET, 48" DIA.	R-3501-TR	INV IN (N)= 701.98 (21" RCP) INV OUT (S)= 701.98 (24" RCP)
421	708.35	CURB INLET, 48" DIA.	R-3501-TL	INV IN (N)= 702.12 (21" RCP) INV OUT (S)= 702.12 (21" RCP)
422	707.00	BEEHIVE INLET, 48" DIA.	R-4342	INV IN (W)= 702.85 (15" RCP) INV IN (N)= 702.60 (18" RCP) INV OUT (S)= 702.60 (21" RCP)
423	709.25	CURB INLET, 24 X 24	R-3501-TR	INV IN (W)= 704.90 (15" RCP) INV OUT (E)= 704.90 (15" RCP)
424	709.25	CURB INLET, 24 X 24	R-3501-TL	INV OUT (E)= 705.00 (15" RCP)
432	702.92	FLARED END SECTION, 36" DIA.	N/A	INV IN (N)= 699.50 (36" RCP)
433	706.85	60" DIA. MANHOLE	R-1772	INV IN (NE)= 699.80 (36" RCP) INV OUT (S)= 699.80 (36" RCP)
434	706.29	CURB INLET, 60" DIA.	R-3501-TL	INV IN (N)= 699.89 (36" RCP) INV OUT (SW)= 699.89 (36" RCP)
435	706.29	CURB INLET, 60" DIA.	R-3501-TR	INV IN (N)= 699.95 (36" RCP) INV OUT (S)= 699.95 (36" RCP)
436	705.55	BEEHIVE INLET, 60" DIA.	R-4342	INV IN (N)= 700.18 (36" RCP) INV IN (E)= 701.18 (15" RCP) INV OUT (S)= 700.18 (36" RCP)
437	706.39	CURB INLET, 24 X 24	R-3501-TL	INV IN (E)= 702.04 (15" RCP) INV OUT (W)= 702.04 (15" RCP)
438	706.39	CURB INLET, 24 X 24	R-3501-TR	INV IN (E)= 702.14 (15" RCP) INV OUT (W)= 702.14 (15" RCP)
439	706.05	BEEHIVE INLET, 24 X 24	R-4342	INV OUT (W)= 702.60 (15" RCP)
440	706.66	CURB INLET, 60" DIA.	R-3501-TL	INV IN (N)= 700.35 (30" RCP) INV OUT (S)= 700.35 (36" RCP)
441	706.66	CURB INLET, 60" DIA.	R-3501-TR	INV IN (N)= 700.44 (30" RCP) INV OUT (S)= 700.44 (30" RCP)
442	705.80	BEEHIVE INLET, 60" DIA.	R-4342	INV IN (N)= 701.20 (18" RCP) INV IN (E)= 701.00 (24" RCP) INV OUT (S)= 700.80 (30" RCP)
459	701.83	FLARED END SECTION, 24" DIA.	N/A	INV IN (NE)= 699.50 (24" RCP)
460	706.45	BEEHIVE INLET, 48" DIA.	R-4342	INV IN (NE)= 700.30 (24" RCP) INV IN (N)= 701.05 (15" RCP) INV OUT (SW)= 700.30 (24" RCP)

STORM SEWER PIPE DATA TABLE					
UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH	SLOPE
401	400	15"	RCP	132'	0.15%
403	402	18"	RCP	165'	1.15%
404	403	18"	RCP	47'	0.75%
405	404	15"	RCP	28'	1.07%
406	405	15"	RCP	141'	0.50%
407	406	15"	RCP	85'	0.47%
407A	407	15"	RCP	95'	0.40%
408	407	15"	RCP	55'	0.44%
409	408	15"	RCP	28'	0.36%
410	406	15"	RCP	51'	2.51%
412	411	30"	RCP	55'	0.46%
413	412	30"	RCP	110'	0.32%
414	413	24"	RCP	59'	0.77%
415	414	24"	RCP	28'	0.71%
416	415	24"	RCP	141'	0.57%
417	416	15"	RCP	111'	1.13%
418	417	15"	RCP	28'	0.50%
419	418	15"	RCP	141'	0.28%
419A	419	15"	RCP	68'	0.53%
420	416	24"	RCP	141'	0.30%
421	420	21"	RCP	28'	0.50%
422	421	21"	RCP	141'	0.34%
423	422	15"	RCP	111'	1.85%
424	423	15"	RCP	28'	0.36%
433	432	36"	RCP	144'	0.21%
434	433	36"	RCP	43'	0.21%
435	434	36"	RCP	28'	0.21%
436	435	36"	RCP	141'	0.16%
437	436	15"	RCP	191'	0.45%
438	437	15"	RCP	28'	0.35%
439	438	15"	RCP	144'	0.32%
440	436	36"	RCP	141'	0.12%
441	440	30"	RCP	28'	0.32%
442	441	30"	RCP	141'	0.26%
460	459	24"	RCP	45'	1.76%



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PROJECT NO.: W21.0353
DWG NAME: C600 Storm Pipe
DESIGNED BY: JSS
CHECKED BY: JP
DATE: 05-03-2022

REVISIONS AND ISSUES

APPROVAL PENDING NOT FOR CONSTRUCTION

APPROVAL PENDING NOT FOR CONSTRUCTION

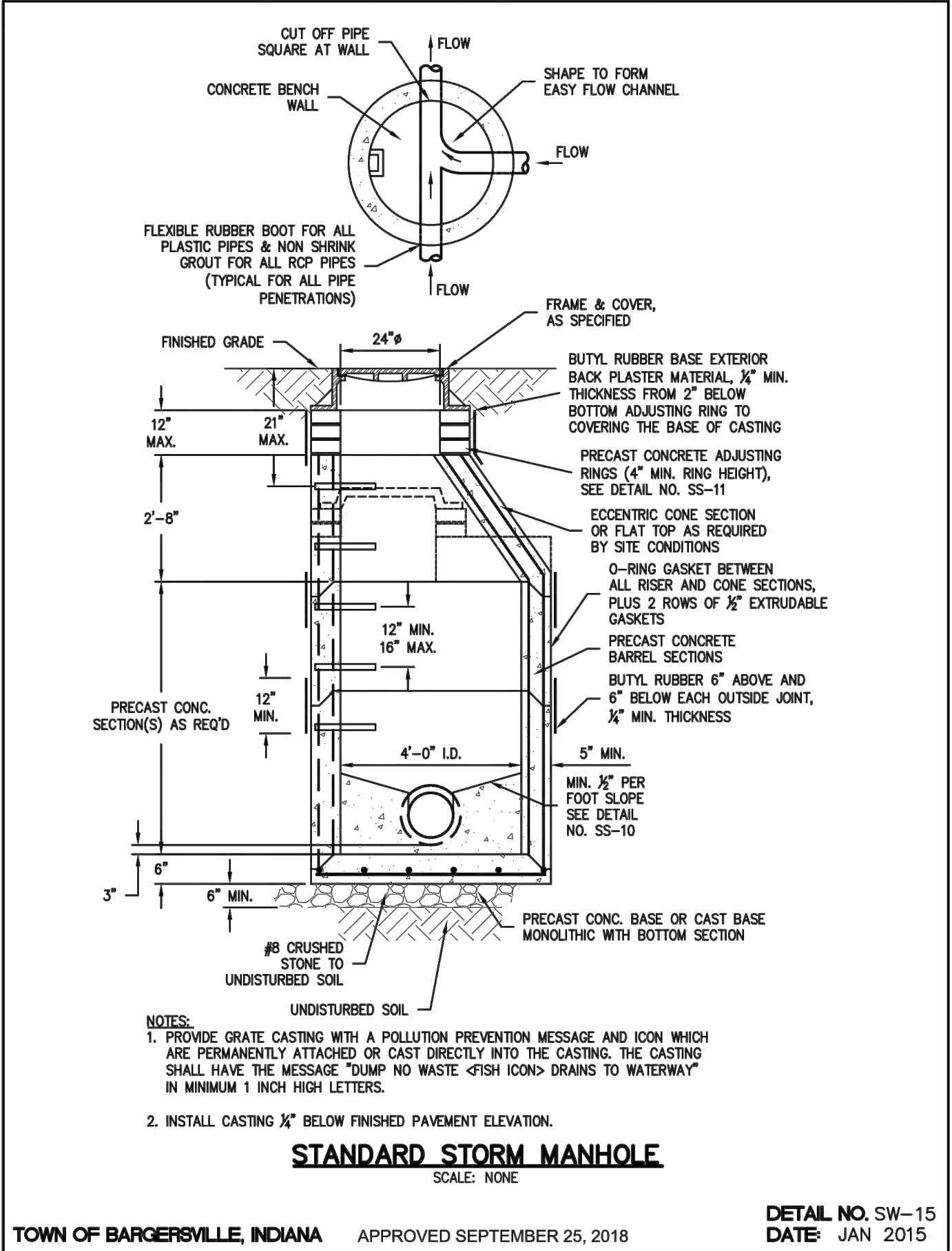
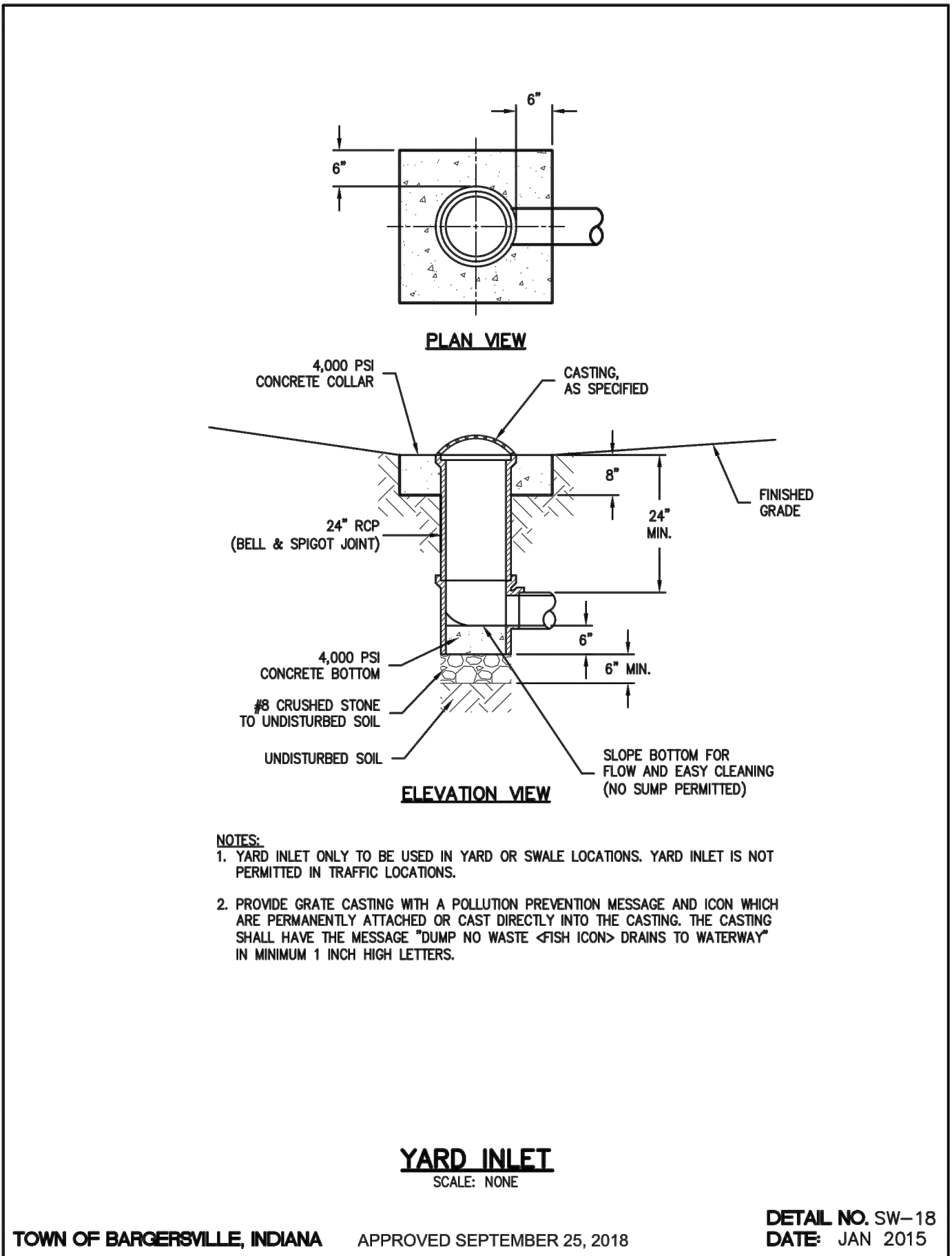
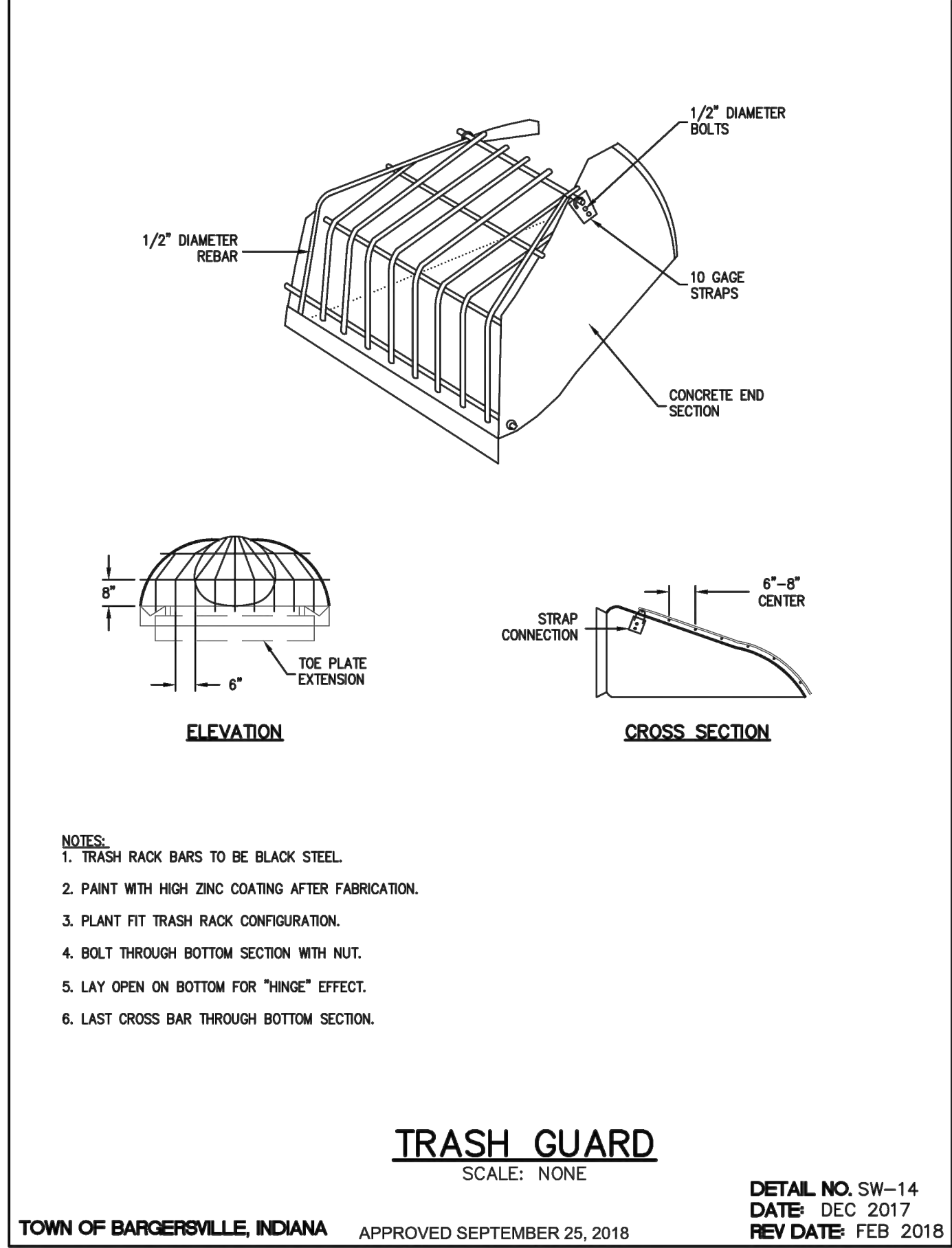
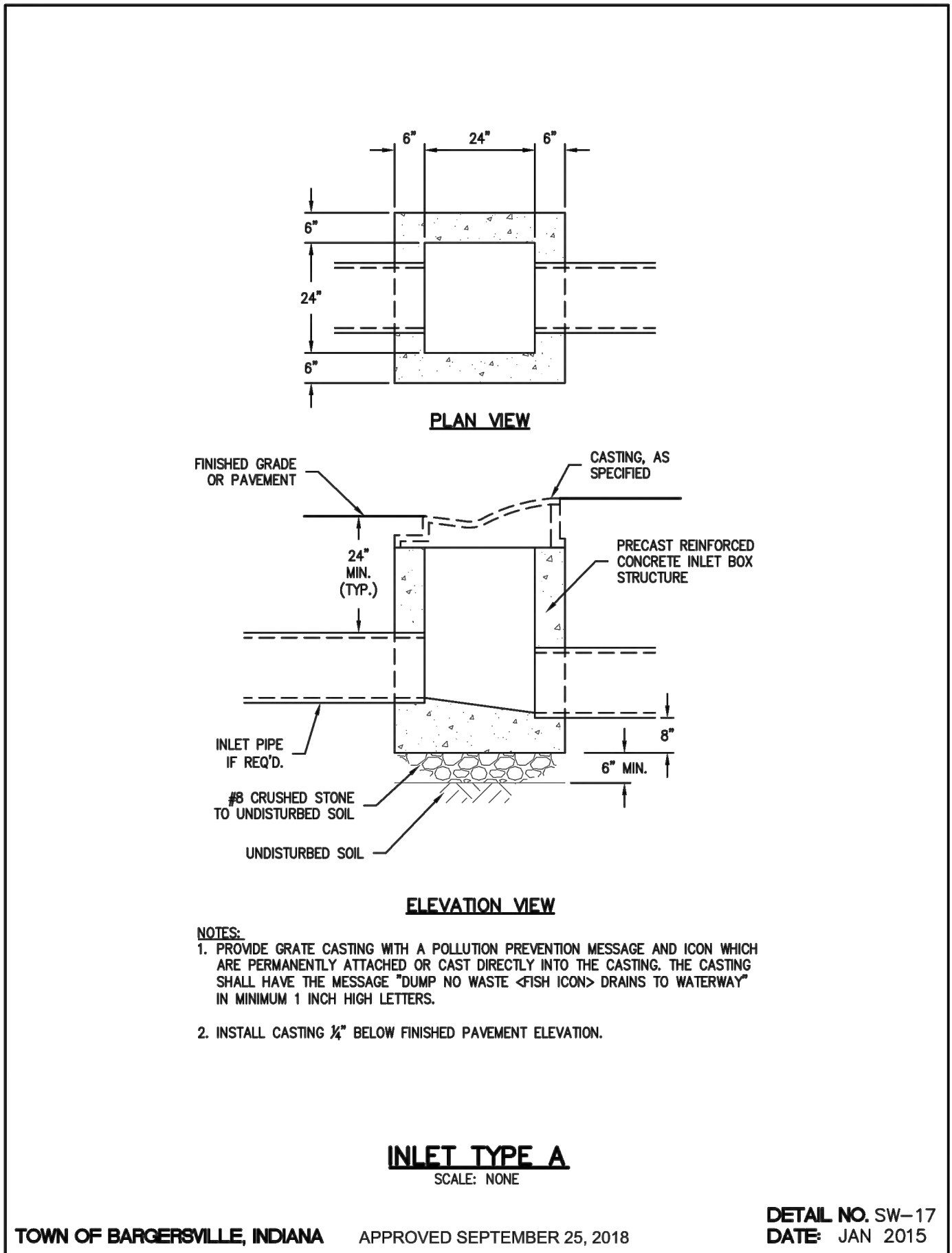
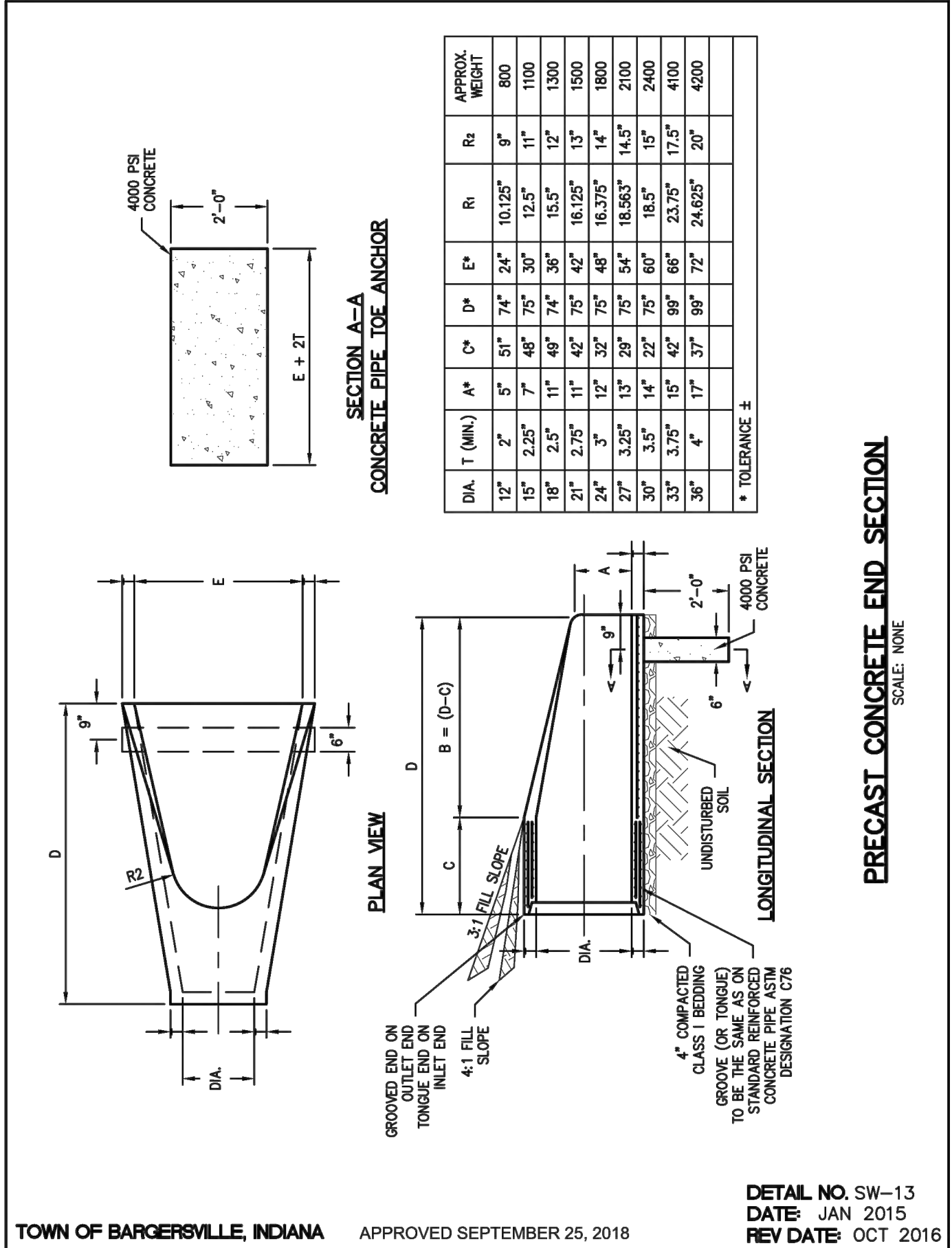
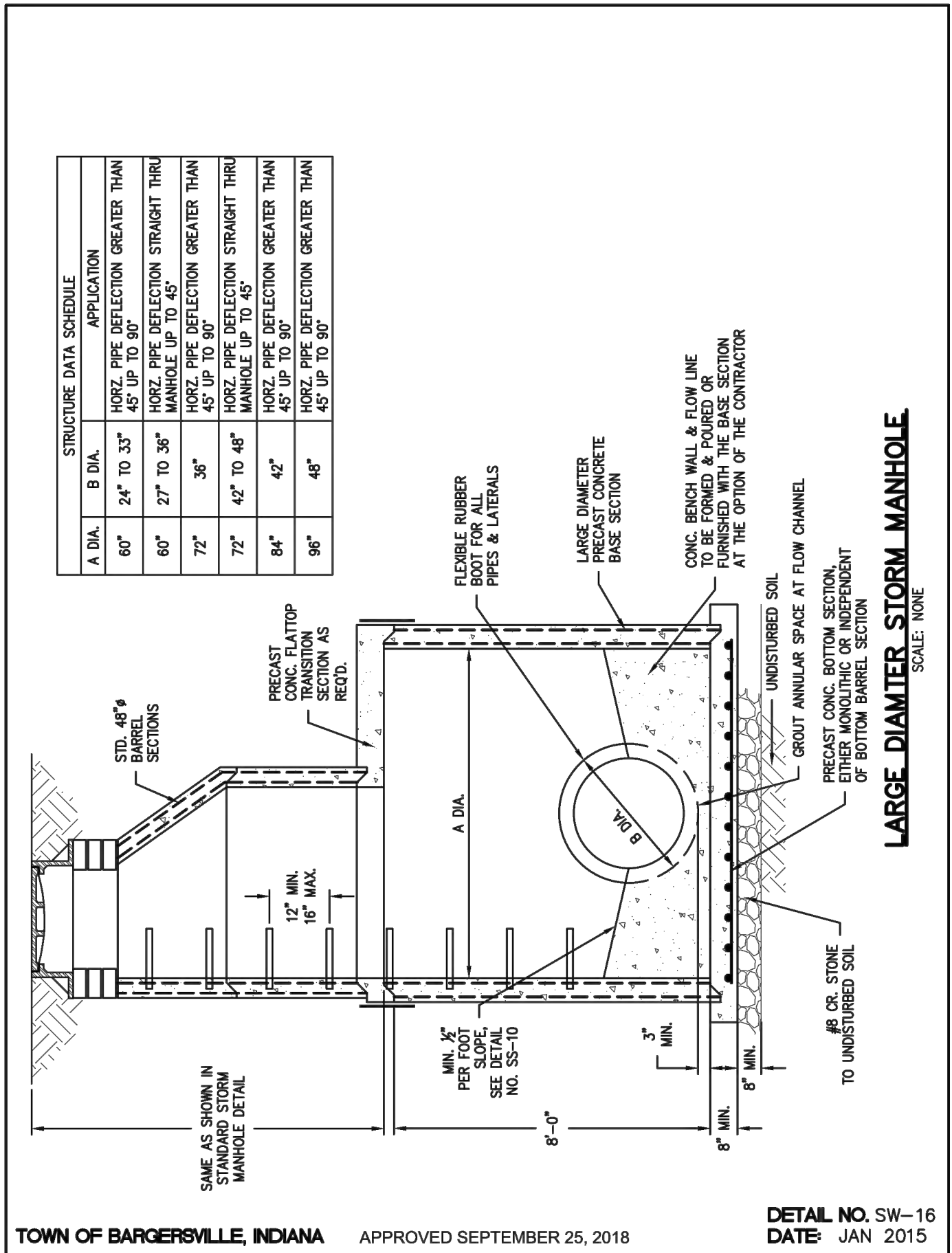
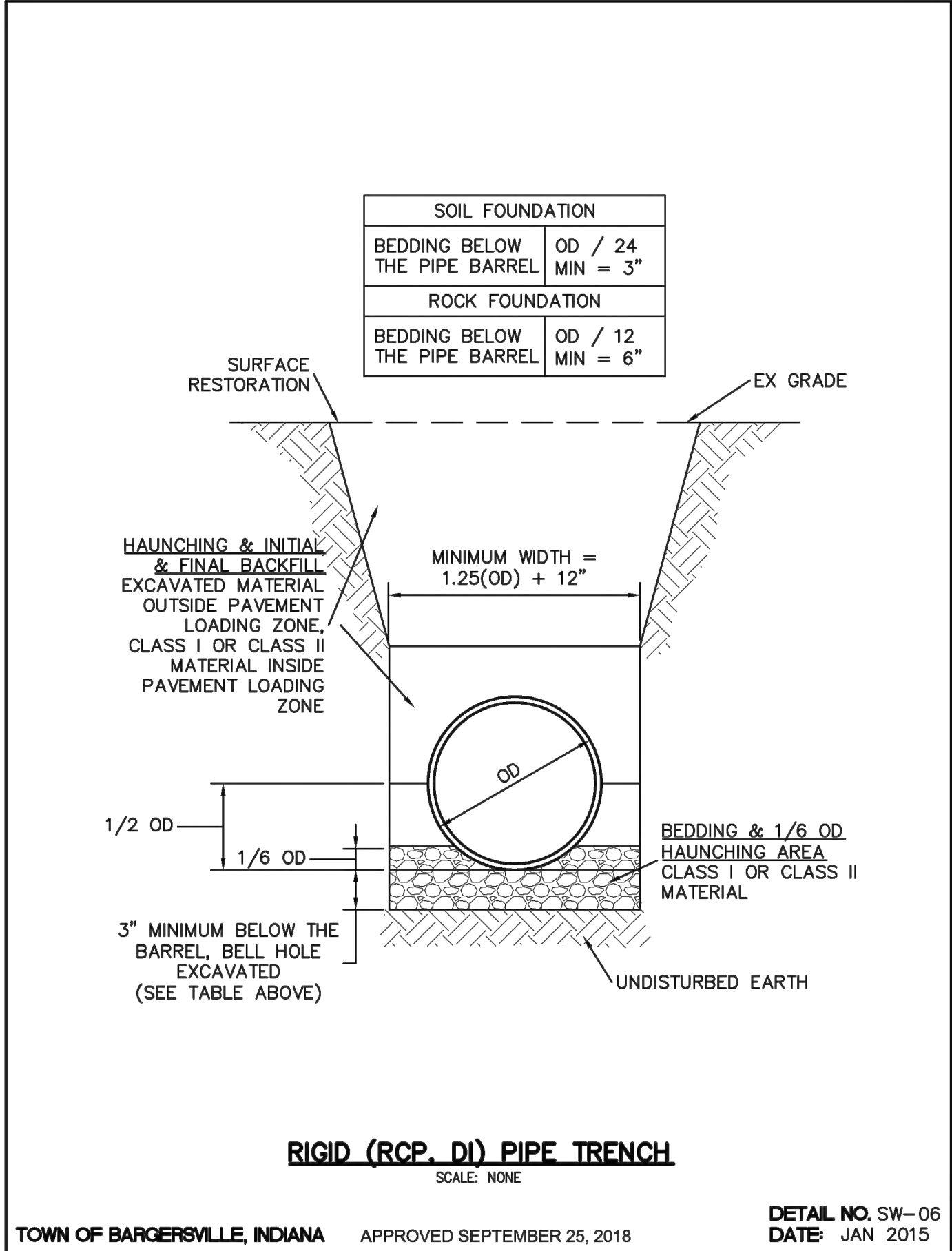
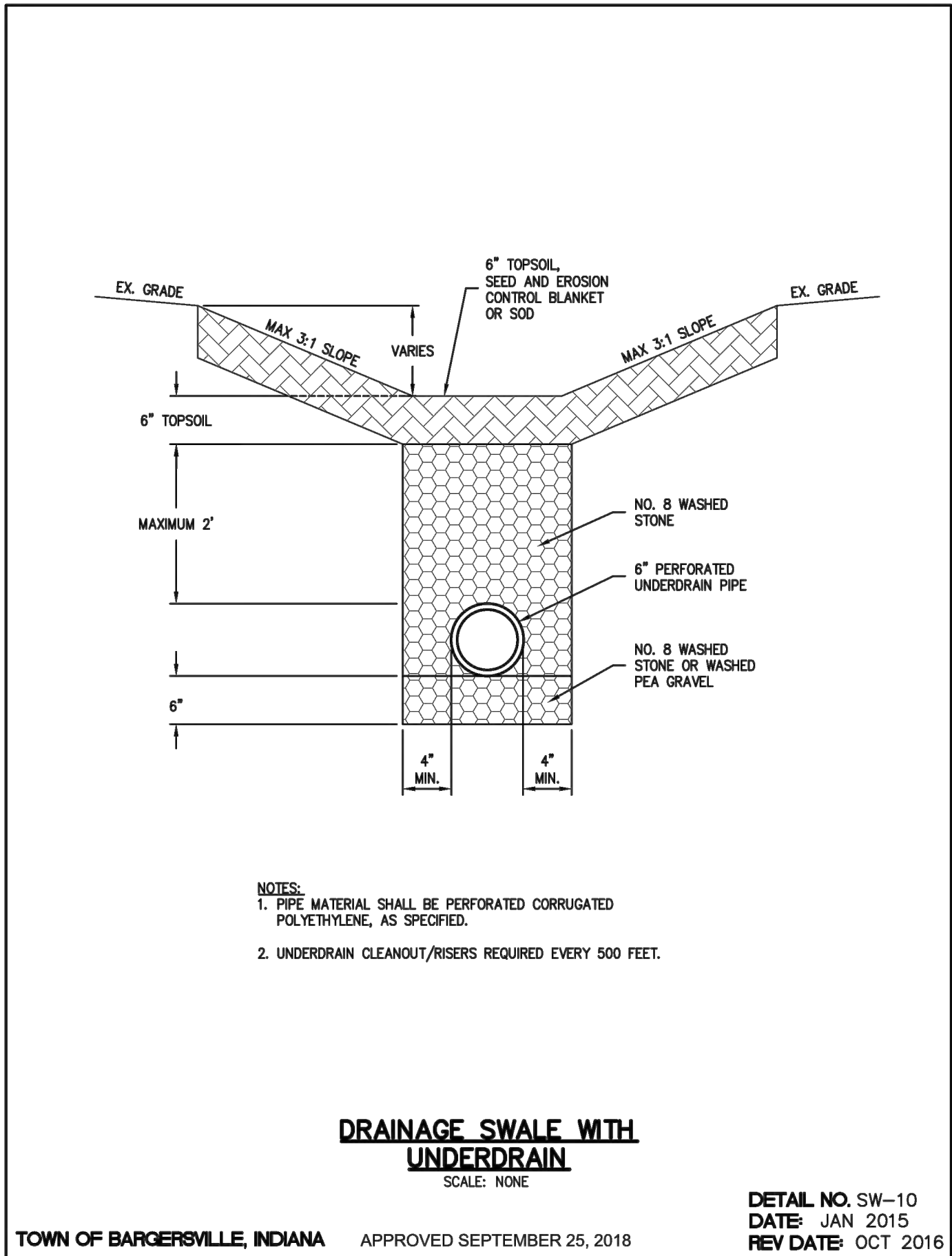
LENNAR

DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

STORM SEWER PLAN AND PROFILE
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C603
PROJECT NO.
W21.0353

LOCATION: J:\2021\W21.0353\Section 10\Engineering\design\detail\CDetail Storm Sewer Details.dwg
DATE: August 16, 2022 - 12:06pm
PLOT: 10/16/2022 12:06pm
PLOT: 10/16/2022 12:06pm



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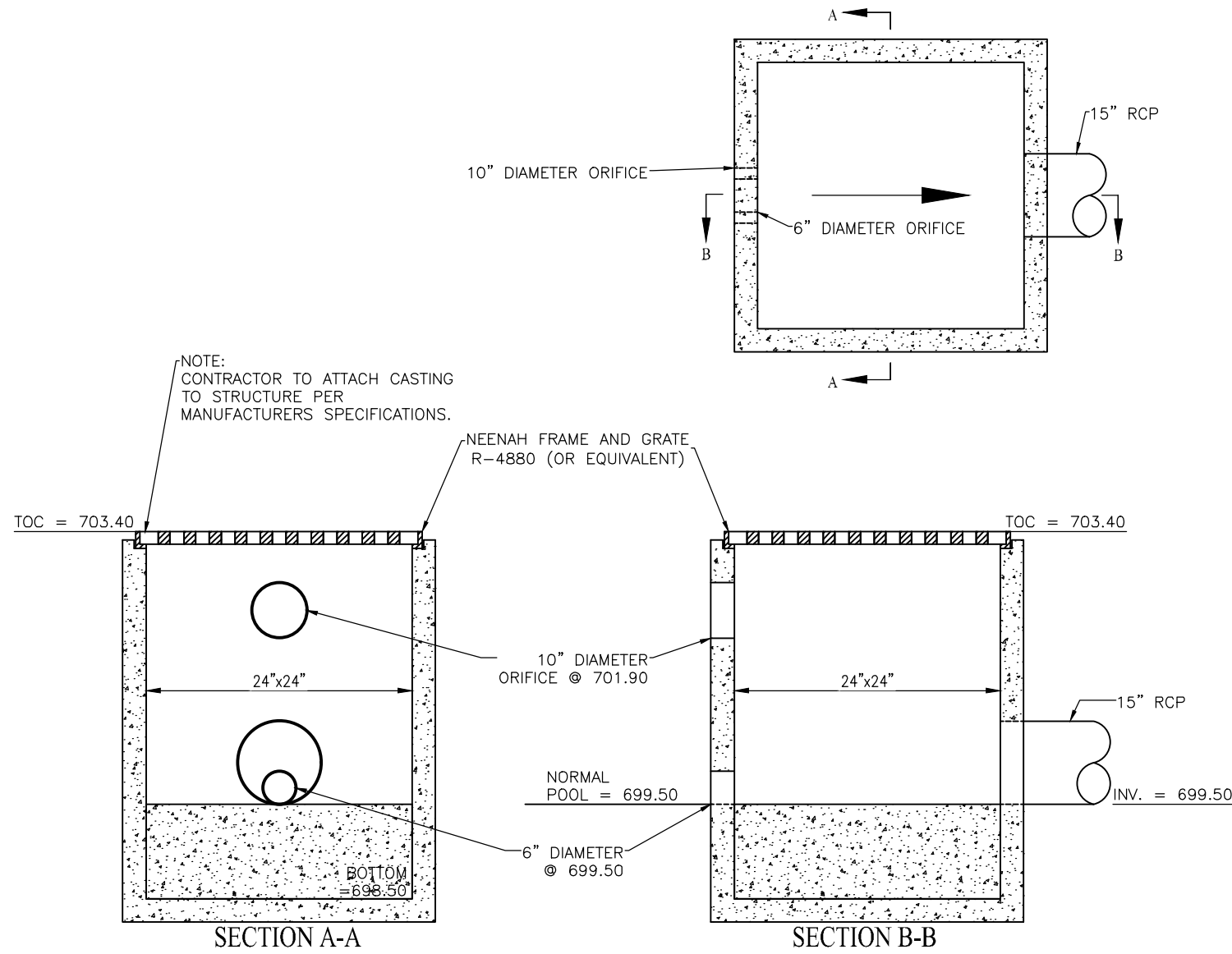
LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STORM SEWER DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana
SHEET NO.
C604
PROJECT NO.
W21.0353

REVISIONS AND ISSUES
BY DATE
APPROVAL PENDING NOT FOR CONSTRUCTION

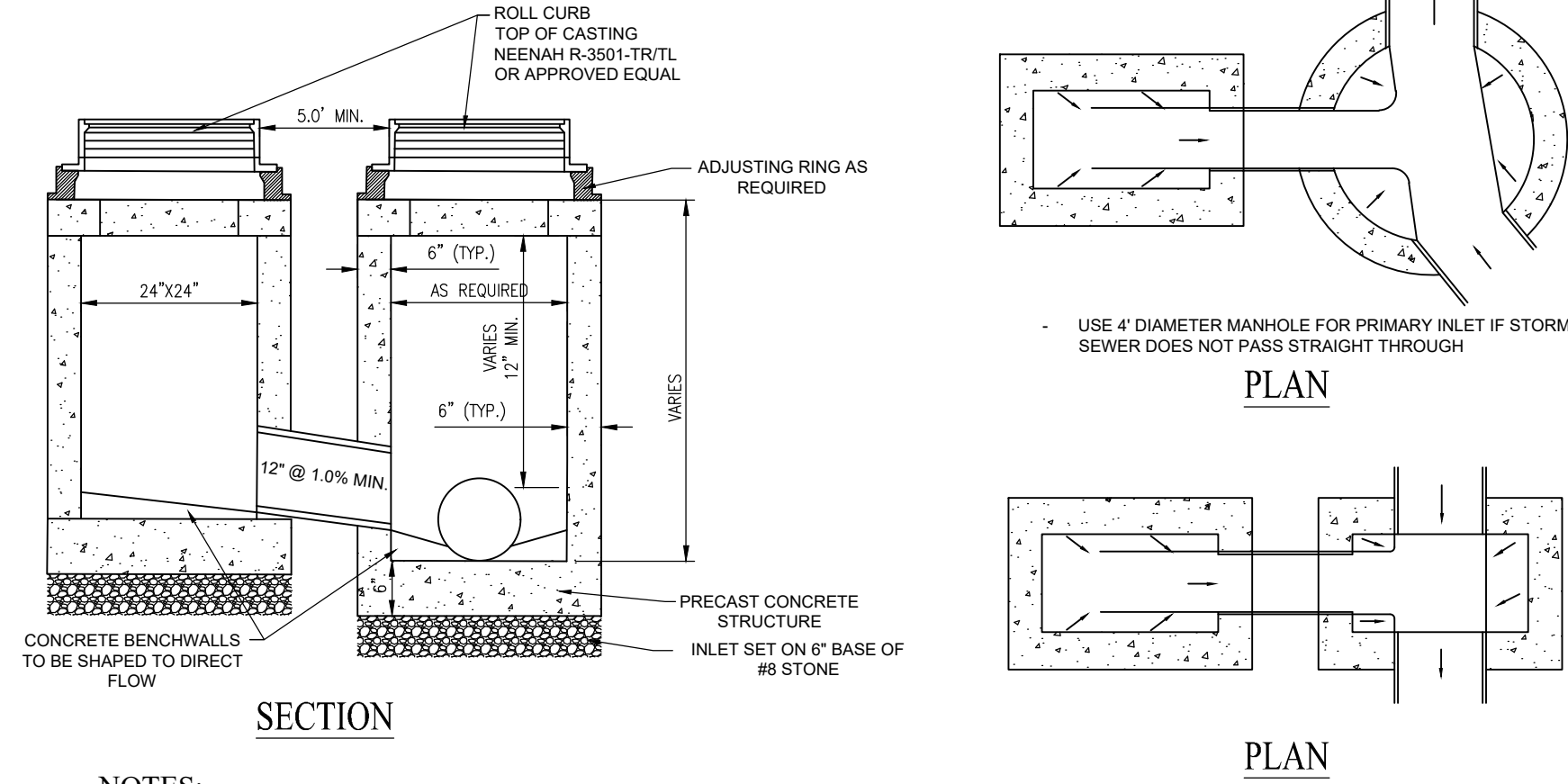
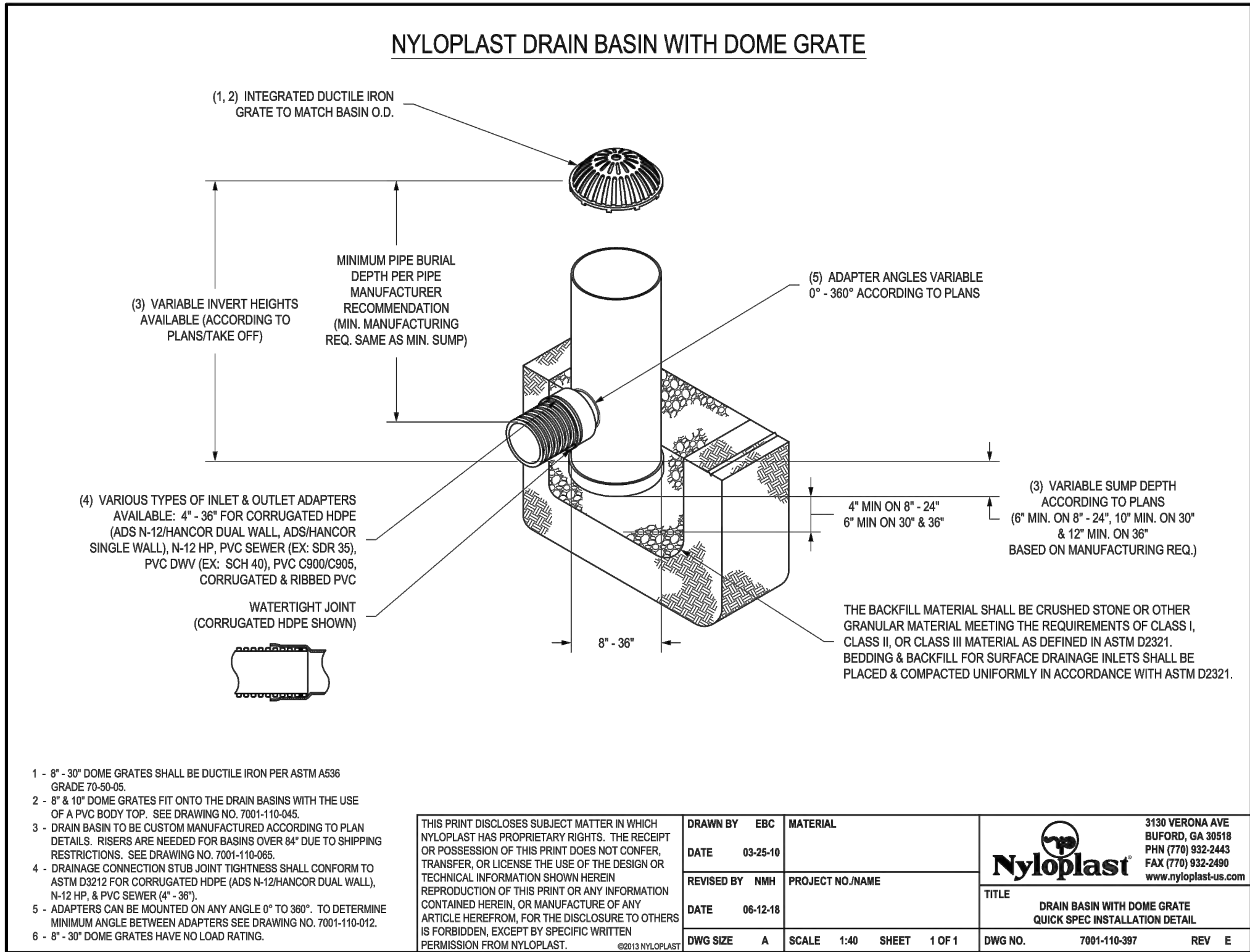
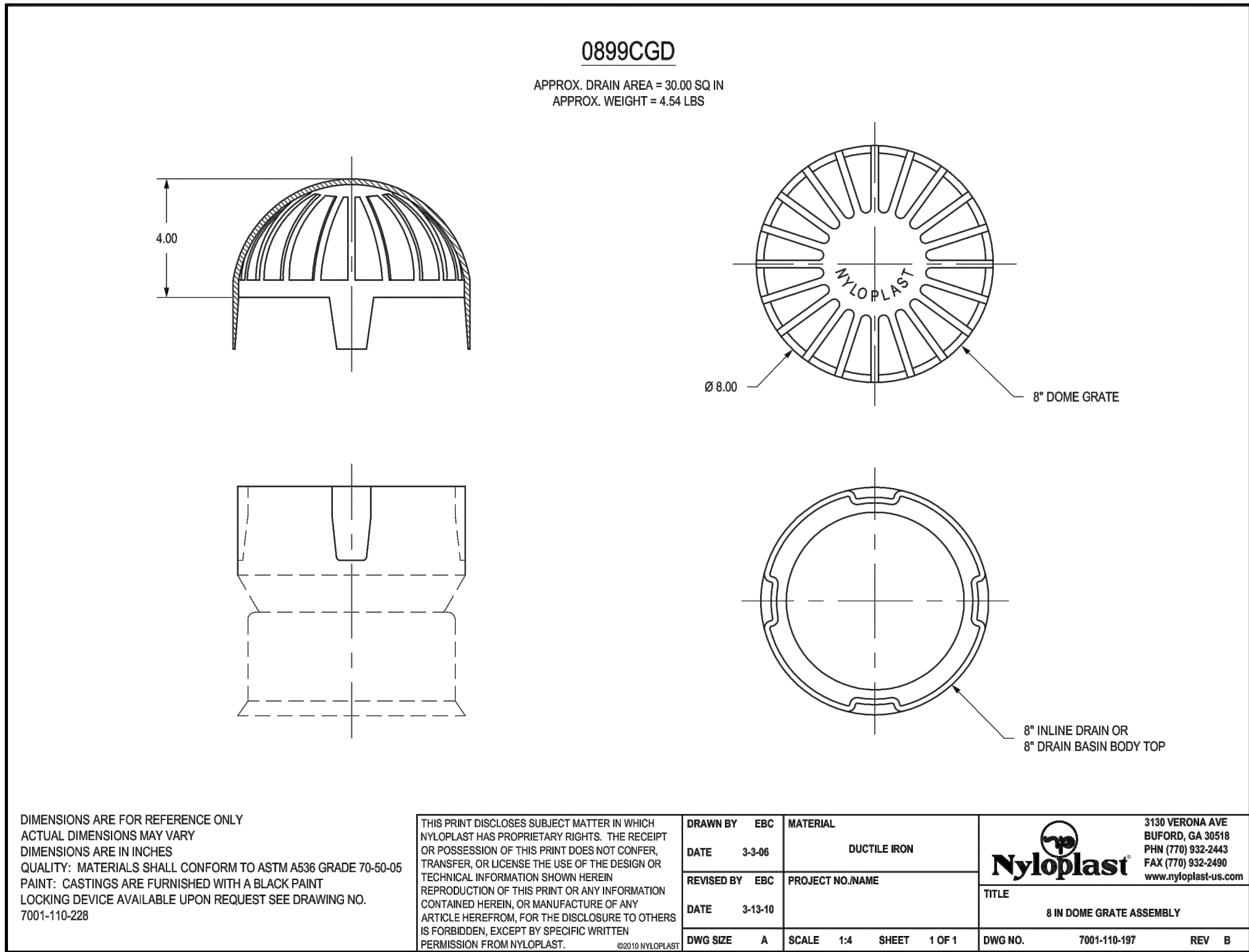
WEIHE ENGINEERS
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PROJECT NO: W21.0353
DWG NAME: C604 Storm Sewer Details
DESIGNED BY: JWS
DRAWN BY: MEN
CHECKED BY: JP
DATE: 05-03-2022

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800 | 452 - 6408
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LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\section\CDM Storm Sewer Details.dwg
DATE/TIME: August 16, 2022 - 12:06pm
PLOT/ED BY: allan



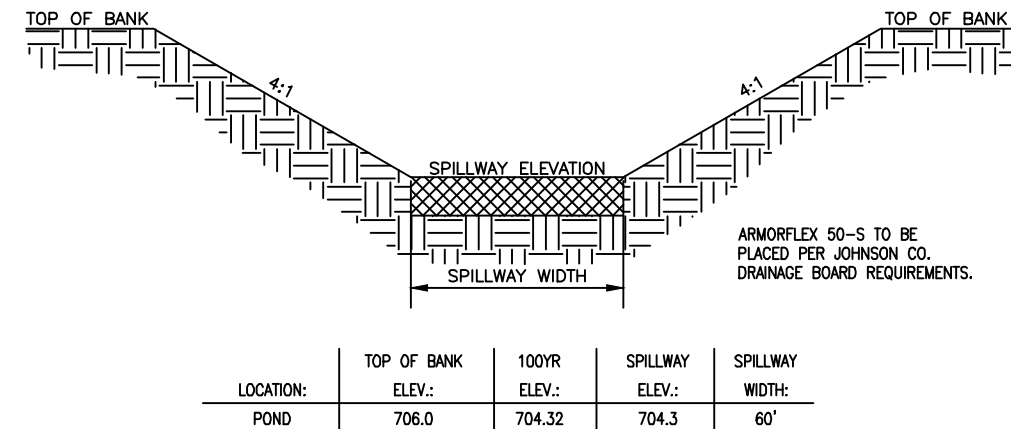
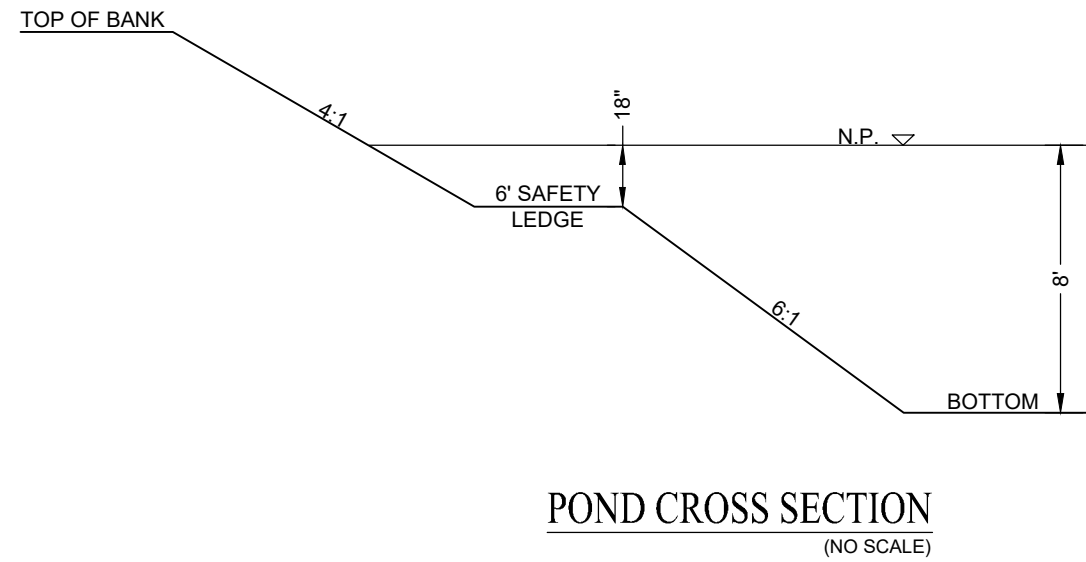
POND OUTLET STRUCTURE #401
NOT TO SCALE



DOUBLE CURB INLET
(NO SCALE)

NOTES:

1. 6" CONCRETE PRECAST OR POURED IN PLACE.
2. REFER TO BEDDING DETAIL AS REQUIRED
3. MIN. 6" FLAT TOP WITH OPENING TO MATCH SPECIFIED CASTING.
4. PIPE CONNECTIONS TO BE SEALED WITH NON-SHRINK GROUT
5. REFER TO PRECAST CONCRETE ADJUSTING RING DETAIL AS REQUIRED
6. THERE SHALL BE A MINIMUM OF 5.0' OF SEPARATION FROM EDGE OF CASTING TO EDGE OF CASTING FOR DOUBLE INLETS.



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PROJECT NO.	W21.0353
DWG NAME	CDM Storm Sewer Details
DESIGNED BY	EBG
DESIGNED BY	SCS
DRAWN BY	EBG
DRAWN BY	SCS
CHECKED BY	JP
DATE	05-03-2022

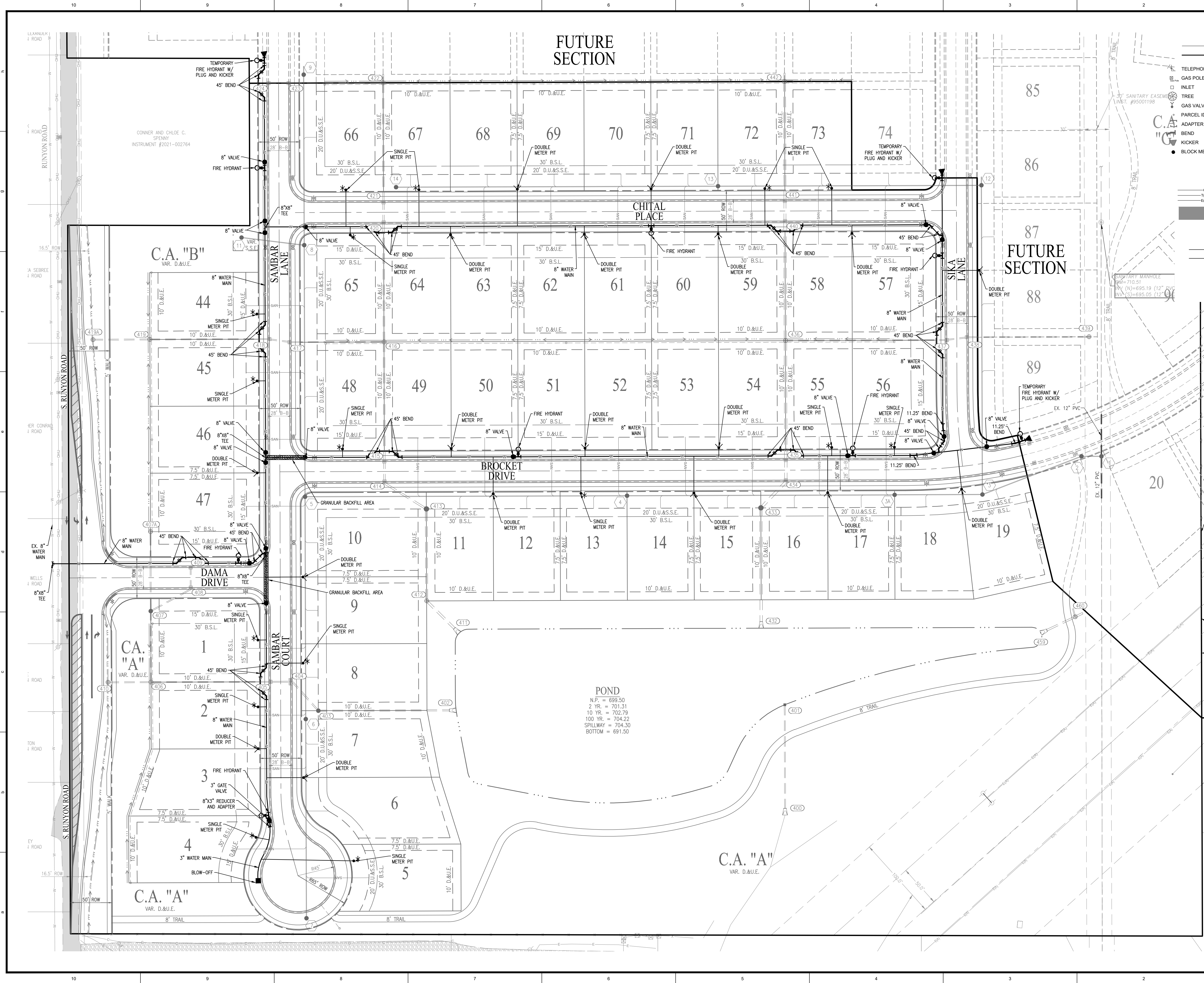
REVISIONS AND ISSUES	DATE	BY
APPROVAL PENDING NOT FOR CONSTRUCTION		

APPROVAL PENDING
NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
STORM SEWER DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C605
PROJECT NO.
W21.0353

LOCATION: 11/20/2019 10:03:53 Section 10 Engineering\design\project\C700 Water Main Plan.dwg
DATE: 11/20/2019 10:03:53
PLOT: 11/20/2019 10:03:53
PLOTTER: HP-DesignJet T1200



LEGEND

	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	TELEPHONE POLE
	GAS POLE
	INLET
	TREE
	GAS VALVE
	PARCEL ID
	ADAPTER
	BEND
	KICKER
	BLOCK METER PIT
	PROPOSED HYDRANT WITH VALVE
	EXISTING HYDRANT WITH VALVE
	BUTTERFLY VALVE
	VALVE
	BLOWOFF ASSEMBLY
	AIR RELIEF VALVE
	PLUG
	REDUCER
	T.J. TEE
	M.J. SLEEVE
	CROSS
	CASING PIPE
	GAS LINES
	TELEPHONE LINES
	ELECTRIC LINES
	FUTURE DRIVEWAY
	ELECTRIC PEDESTAL
	PHONE PEDESTAL
	ELECTRICAL TRANSFORMER
	SINGLE WATER LATERAL
	DOUBLE WATER LATERAL

- WATER MAIN NOTES:**
- SEE CONSTRUCTION STANDARDS OF THE LOCAL WATER UTILITY FOR THE INSTALLATION OF WATER MAINS, SERVICE LINES, METERS, AND APPURTENANCES.
 - MINIMUM COVER OVER TOP OF ALL WATER MAINS TO BE 54 INCHES FROM FINISHED GRADE.
 - ALL VALVES ARE TO BE INSTALLED WITHIN 10' OF AN INTERSECTION OR NEAR A FIRE HYDRANT.
 - VALVES MUST HAVE POSI-CAP OR EQUIVALENT, FOR VALVE BOX STABILIZATION AND CENTERING.
 - THE WATER MAIN MUST MAINTAIN A MINIMUM OF 10 FEET OF SEPARATION WITH THE SEWER MAIN AT ALL TIMES.
 - HYDRANTS SHALL BE PER THE REQUIREMENTS OF THE LOCAL WATER UTILITY.
 - FIRE HYDRANTS SHALL HAVE 5 INCH STORZ CONNECTION (MUELLER MODEL 290220 FOR CASTING AND 290221 CAP OR APPROVED EQUAL). THE 5 INCH STORZ CONNECTION SHALL FACE THE STREET. HYDRANTS SHALL BE PLACED BETWEEN THE CURB AND THE SIDEWALK IN THE RIGHT OF WAY.
 - INSTALL ALL DUCTILE IRON WATER MAINS AND ACCESSORIES IN ACCORDANCE WITH AWWA C800.
 - WRAP ALL FITTINGS IN POLYETHYLENE ENCASUREMENT.
 - THE MAXIMUM SPACING BETWEEN FIRE HYDRANTS IN RESIDENTIAL NEIGHBORHOODS AND RESIDENTIALLY ZONED AREAS SHALL BE 500 FEET.
 - ALL WATER TO BE RESTRAINED TOWN OF BARGERSVILLE STANDARDS.
 - WATER AVAILABILITY FEES WILL BE PAID AT THE TIME OF ACQUIRING THE BUILDING PERMITS.
 - ENGINEERING INSPECTION STAFF MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING WITH NEW WATER MAIN CONSTRUCTION.

SCALE: 1" = 50'

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REVISIONS AND ISSUES	DATE	BY
APPROVAL PENDING FOR CONSTRUCTION		

LENNAR

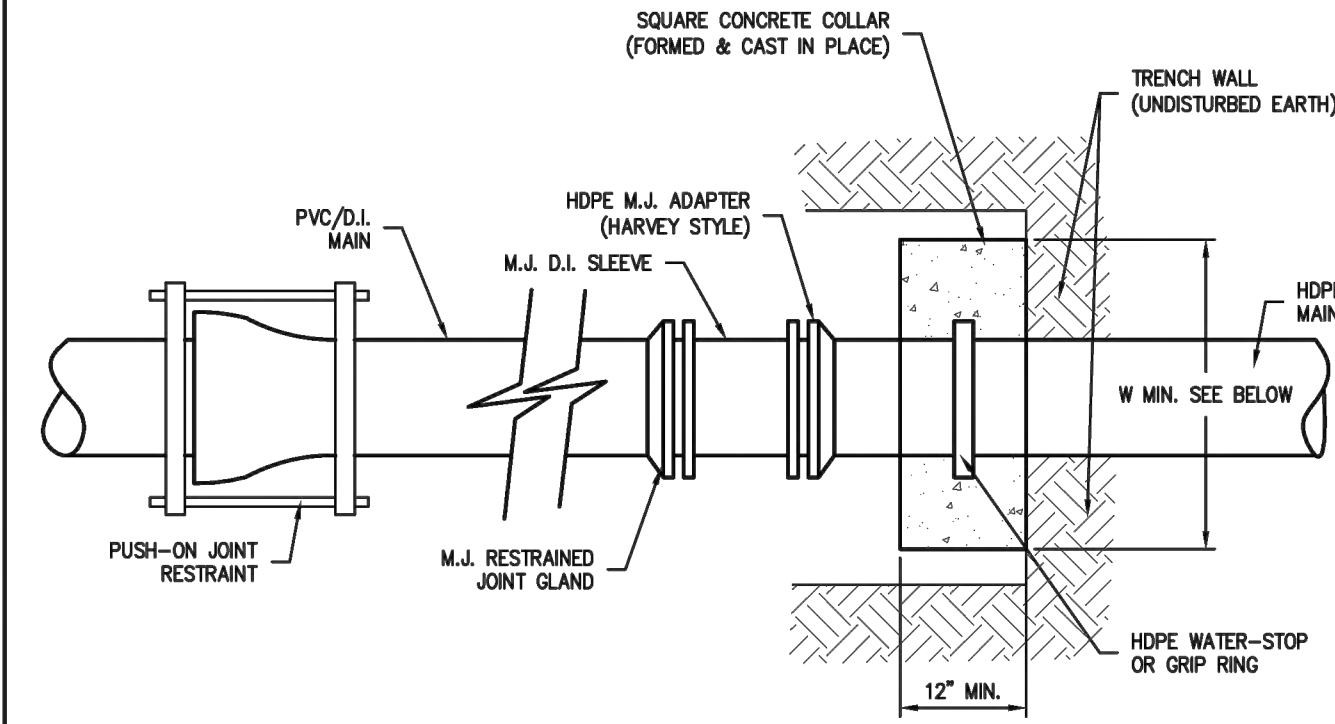
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

WATER MAIN PLAN

Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.	C700
PROJECT NO.	W21.0353

LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\dwg\DW-01 Water Main Details.dwg
DATE: August 18, 2022 - 12:10pm
PLOT: 10/18/2022 12:10pm
PLOT: 10/18/2022 12:10pm

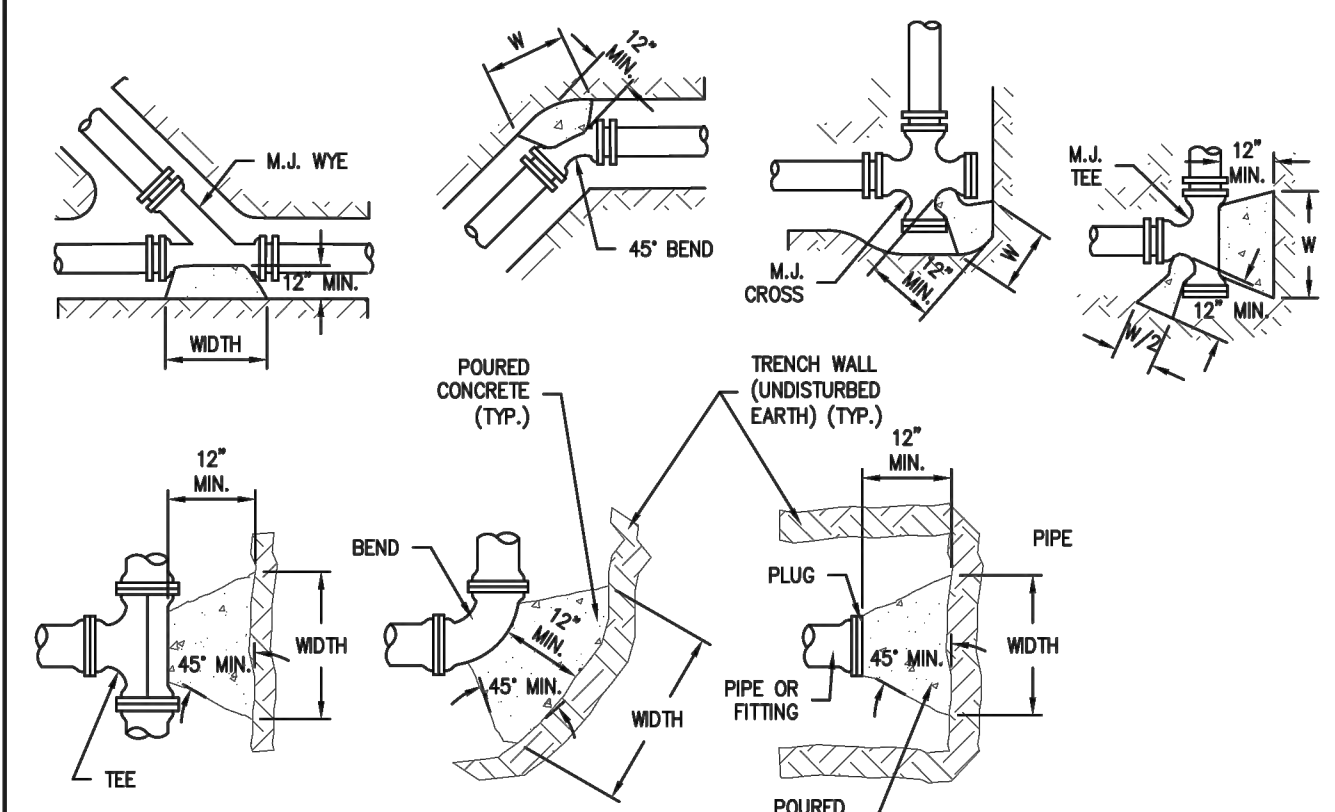


PIPE SIZE	BRACING AREA OF CONCRETE COLLAR	W MIN.
6"	5 SQ. FT.	3'-0"
8"	9 SQ. FT.	3'-6"
12"	18 SQ. FT.	4'-3"
16"	21 SQ. FT.	4'-9"
20"	24 SQ. FT.	5'-0"

TRANSITION COUPLING
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-01
DATE: JAN 2015

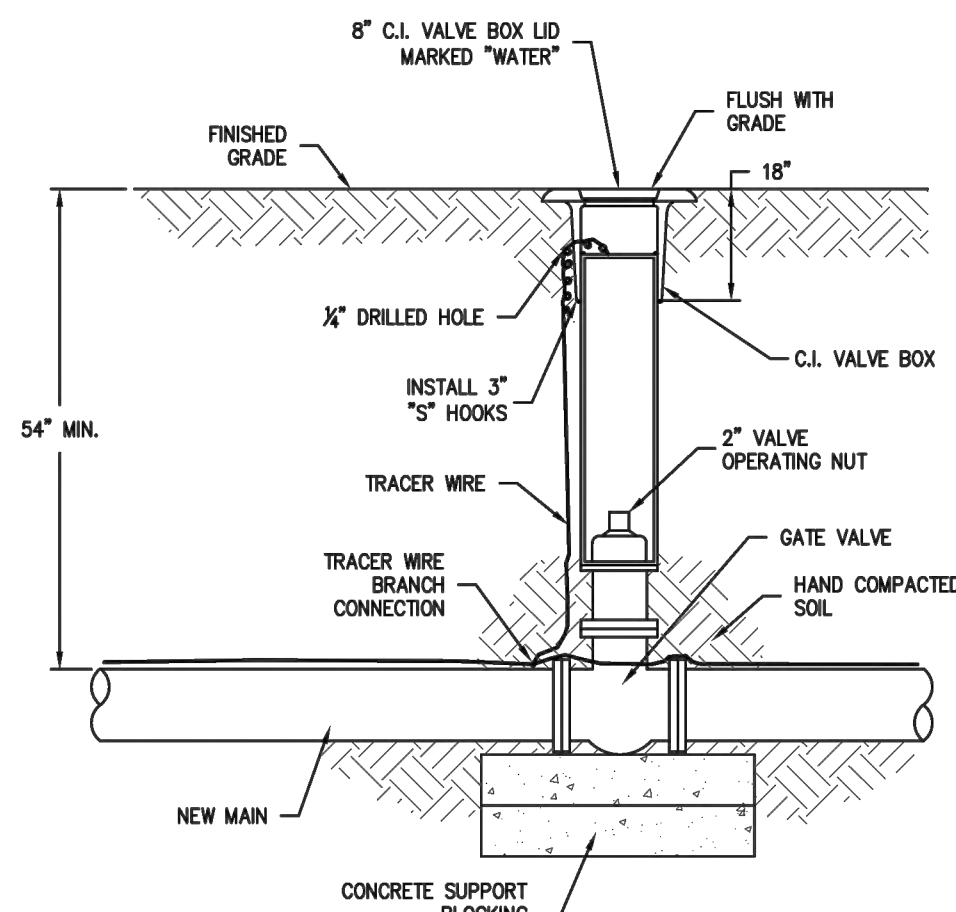


SIZE	TEE & PLUG	90° BEND	45° BEND	22½° BEND	11½° BEND
4"	2.0	2.5	1.5	1.0	1.0
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
10"	10.0	14.0	7.5	4.0	2.0
12"	14.0	20.0	11.0	5.5	3.0
14"	19.0	27.0	14.5	7.5	4.0
16"	25.0	35.0	19.0	10.0	5.0
18"	31.5	44.5	24.0	12.5	6.5
20"	38.0	54.5	29.5	15.0	7.5
24"	55.5	78.5	42.5	22.0	11.0
30"	55.5	122.0	66.0	34.0	17.0
36"	124.0	175.5	95.0	48.5	24.5
42"	168.0	237.5	128.5	65.5	33.0

WATER MAIN REACTION BLOCKING
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

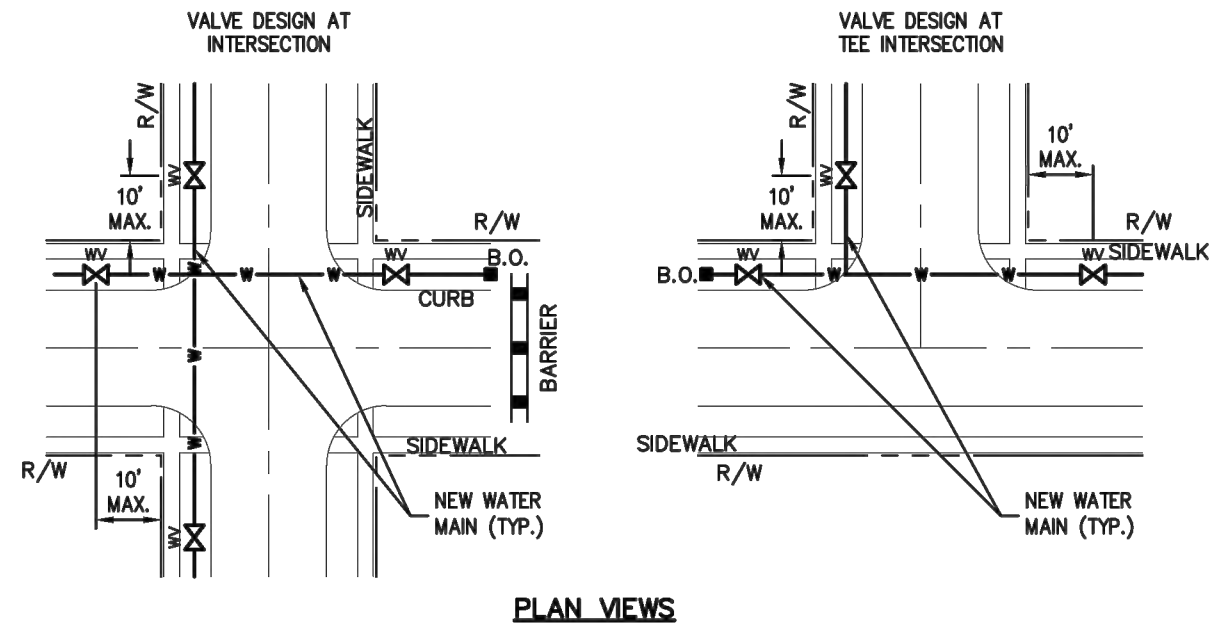
DETAIL NO. DW-06
DATE: JAN 2015



GATE VALVE
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

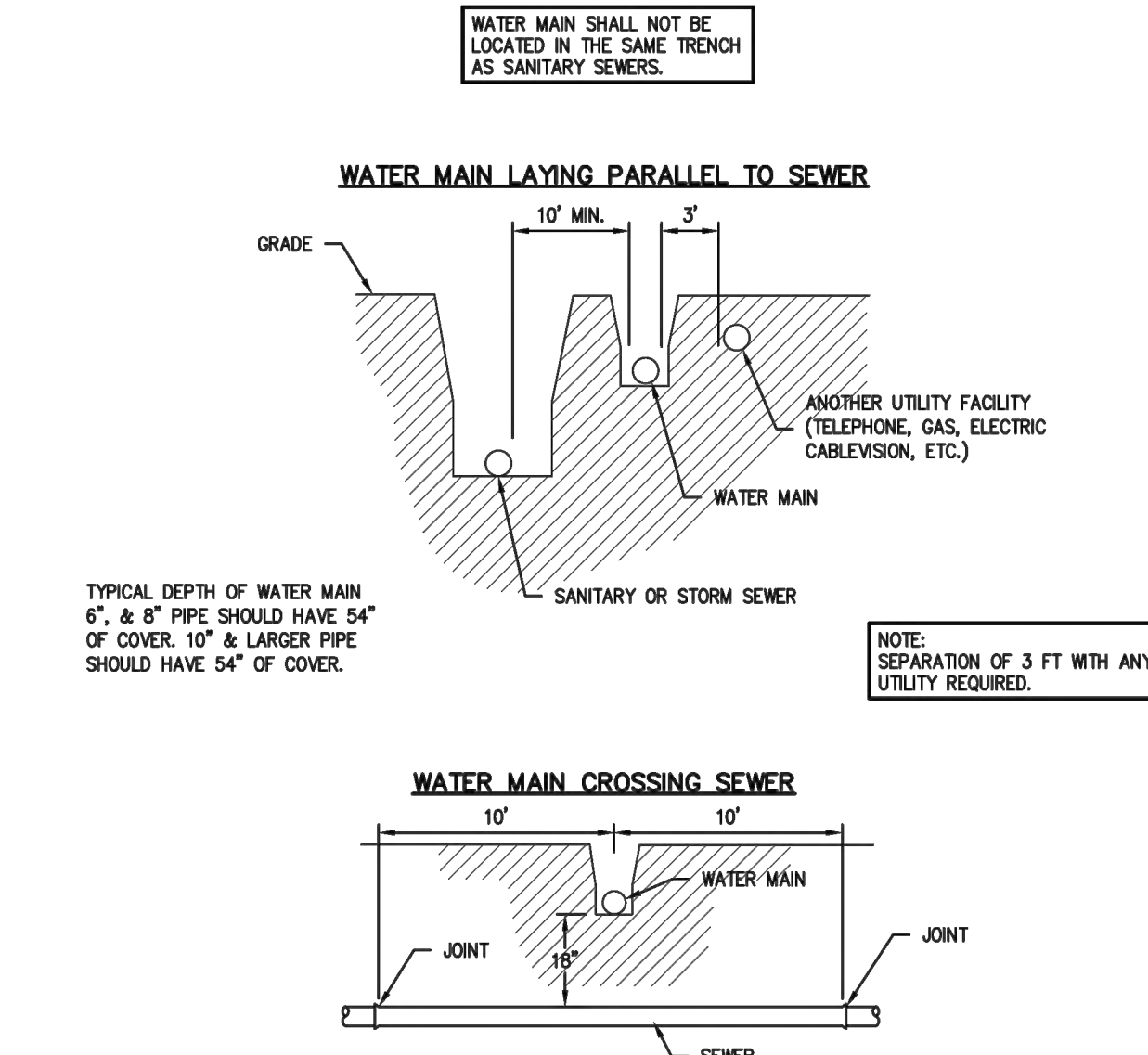
DETAIL NO. DW-02
DATE: JAN 2015



TYPICAL VALVE PLACEMENT
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

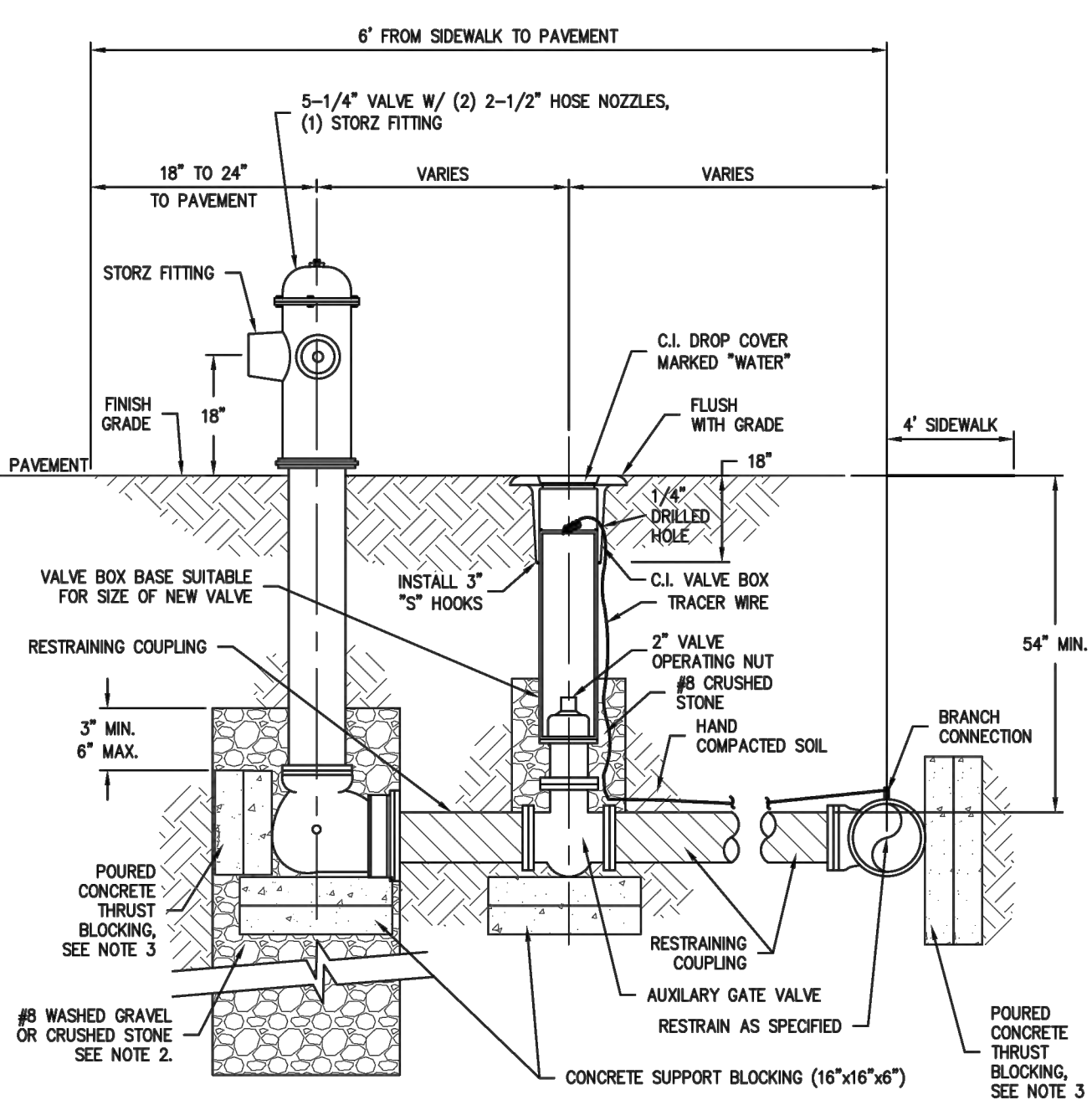
DETAIL NO. DW-08
DATE: JAN 2015



WATER MAIN & SEWER SEPARATION
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

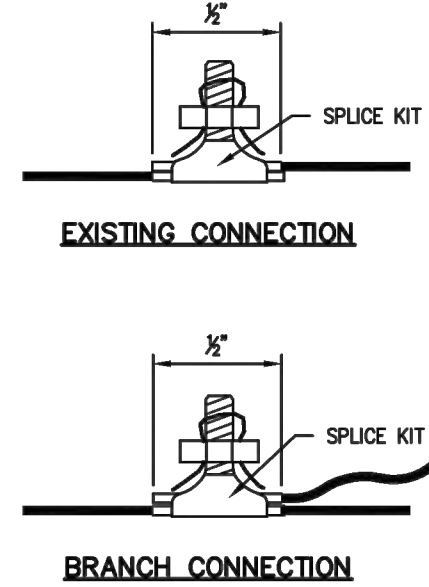
DETAIL NO. DW-09
DATE: JAN 2015



HYDRANT ASSEMBLY
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

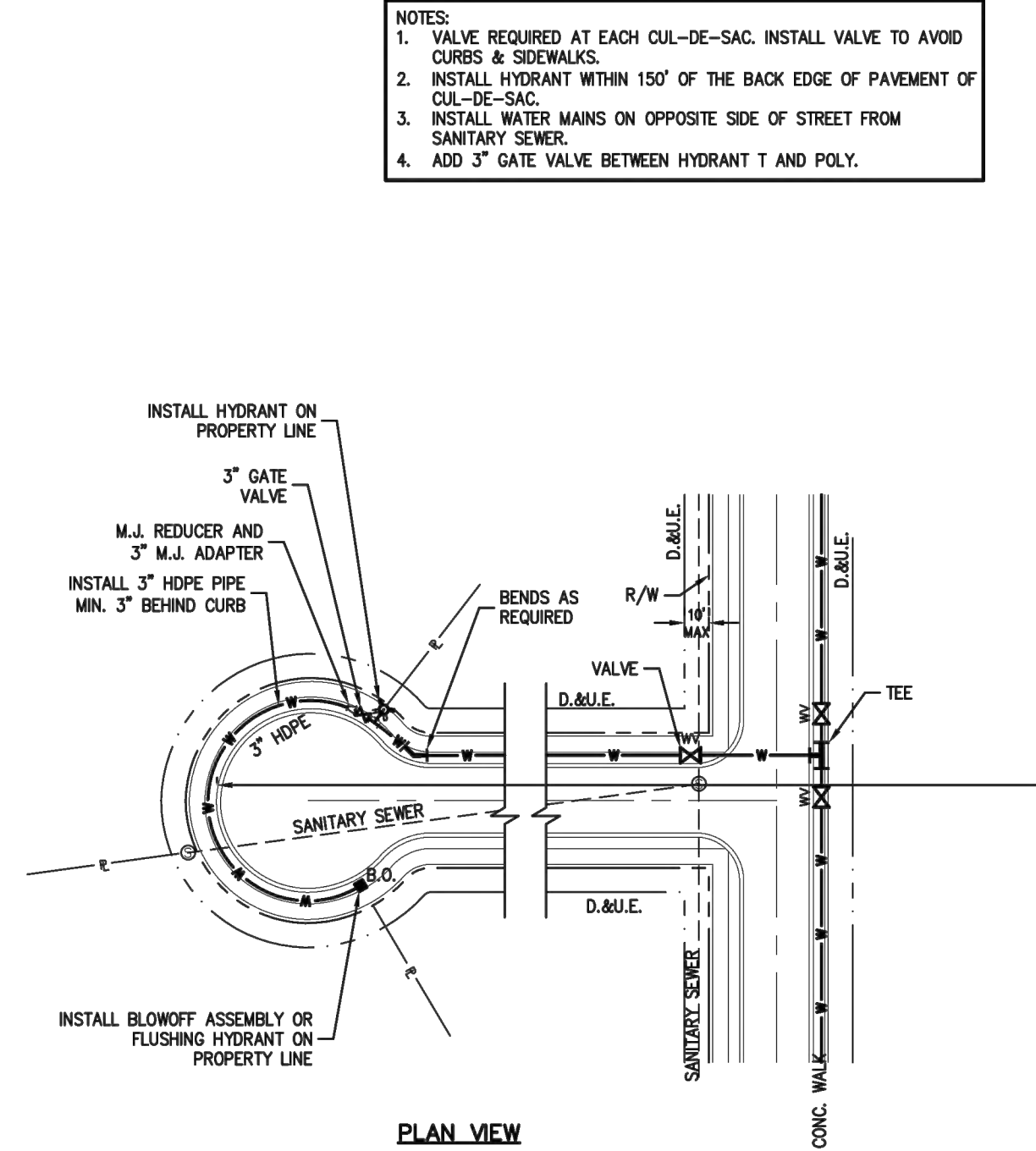
DETAIL NO. DW-04
DATE: JAN 2015
REV DATE: OCT 2016



TRACER WIRE BOLTED CONNECTION
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-05
DATE: JAN 2015



CUL-DE-SAC WATER MAIN & HYDRANT INSTALLATION
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-12
DATE: JAN 2015



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PROJECT NO.	W21.0353
DWG NAME	C701 Water Main Details
DESIGNED BY	SCS
DRAWN BY	SCS
CHECKED BY	JP
DATE	05-03-2022

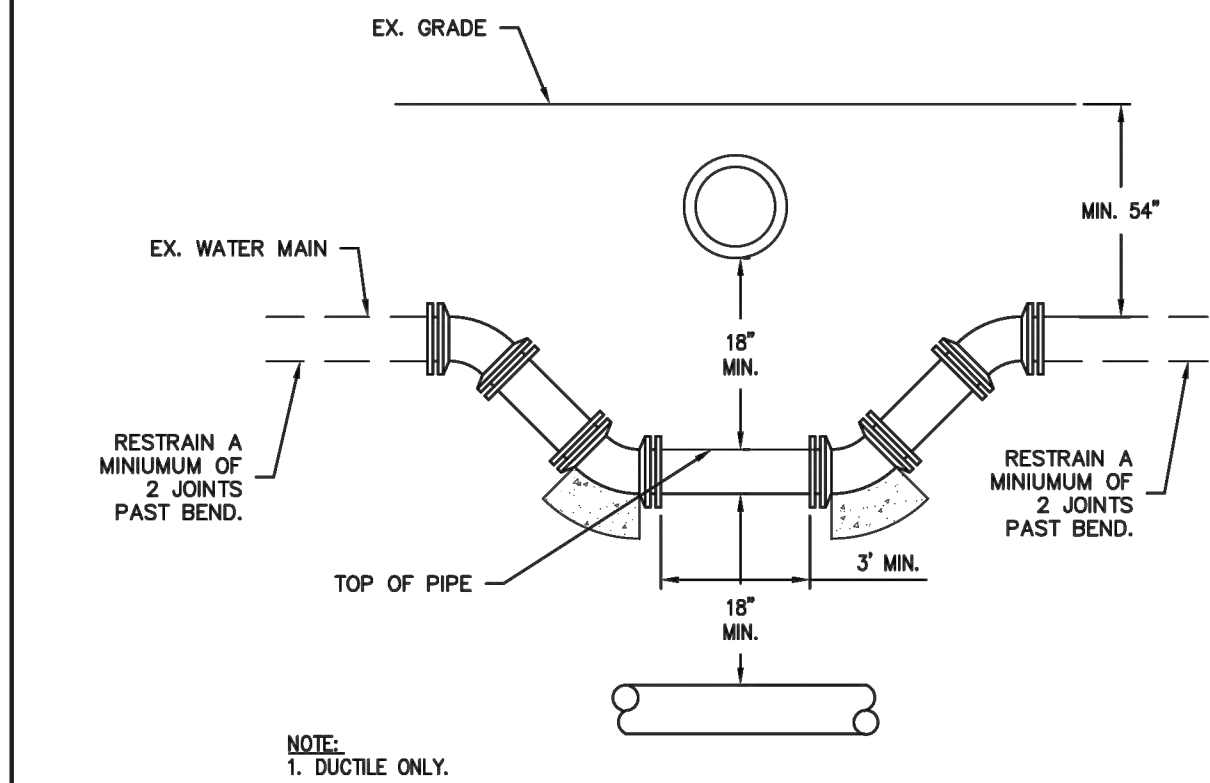
APPROVAL PENDING
NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN

WATER MAIN DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C701
PROJECT NO.
W21.0353

LOCATION: I:\2021\W21.0353\Section 10\Engineering\design\c771 Water Main Details.dwg
DATE: August 18, 2022 - 12:10pm
PLOT: 10/18/2022 12:10pm



SPOT LOWERING
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-13
DATE: JAN 2015

BEND RESTRAINT
ALL BENDS REQUIRE RESTRAINERS
ALL BENDS ARE DUCTILE IRON AND REQUIRE
(1) GRIP RING ON EACH SIDE OF THE FITTING.

22 1/2\"/>

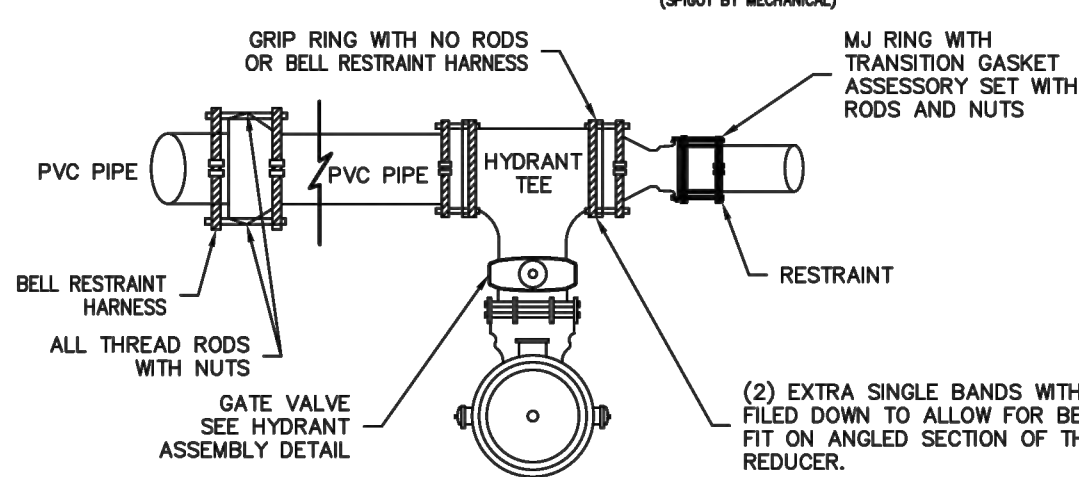
THRUST BLOCK REQUIRED ON ALL BENDS.

MAIN LINE REDUCER

REDUCERS CAN ONLY BE USED AT A INTERSECTION
REDUCERS ON 6\"/>

REDUCERS ON 10\"/>

JOINT RESTRAINT DETAIL

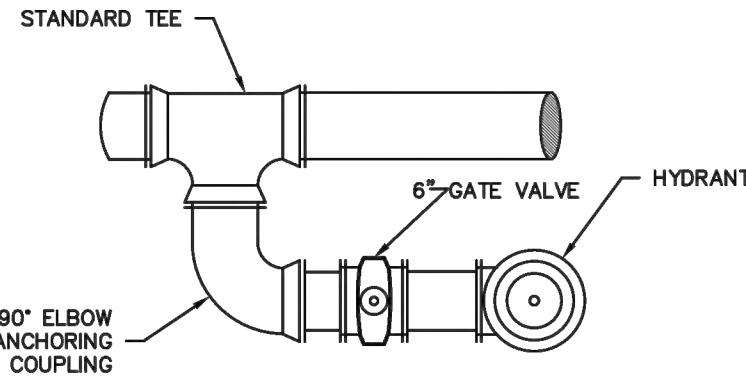


POLY REDUCER DETAIL
(SPROUT BY MECHANICAL)

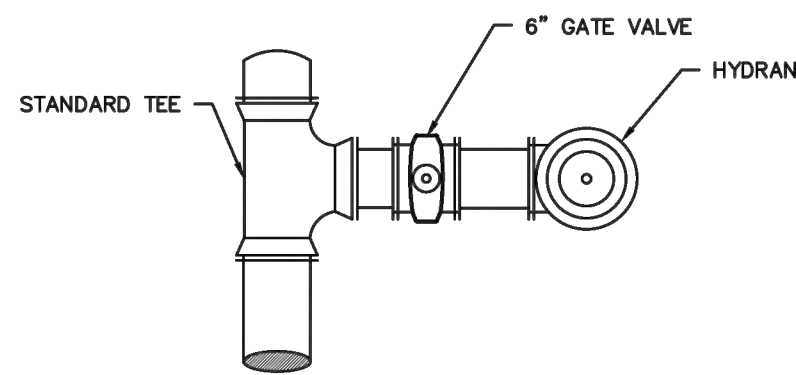
INSTALLATION OF RESTRAINTS
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-16
DATE: JAN 2015
REV DATE: OCT 2016



INSTALLATION PARALLEL TO MAIN



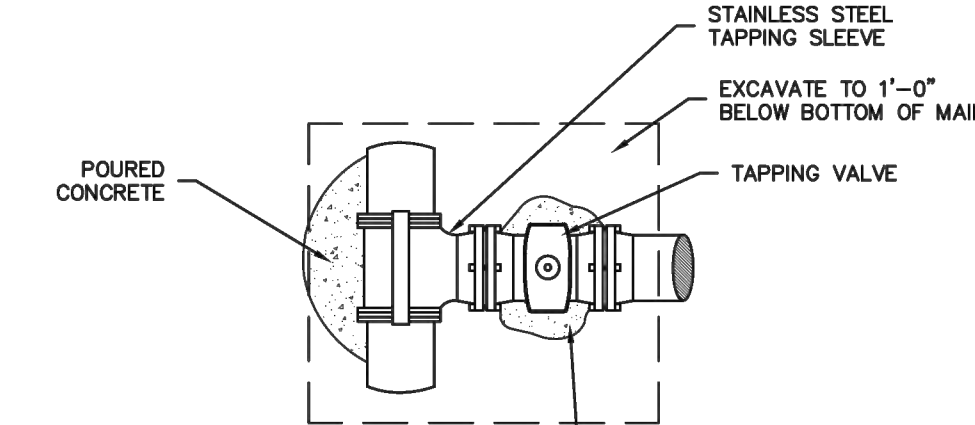
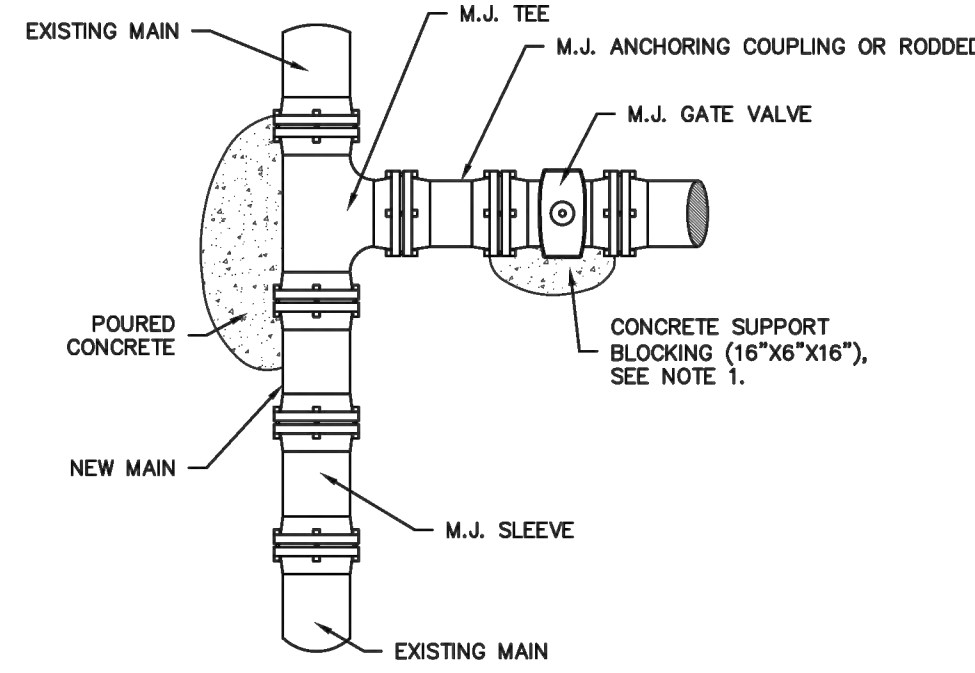
INSTALLATION PERPENDICULAR TO MAIN

NOTE:
1. ALL TEES MUST HAVE POURED THRUST BLOCKS.
(SEE APPLICABLE DETAILS).

HYDRANT CONNECTION
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. DW-17
DATE: JAN 2015

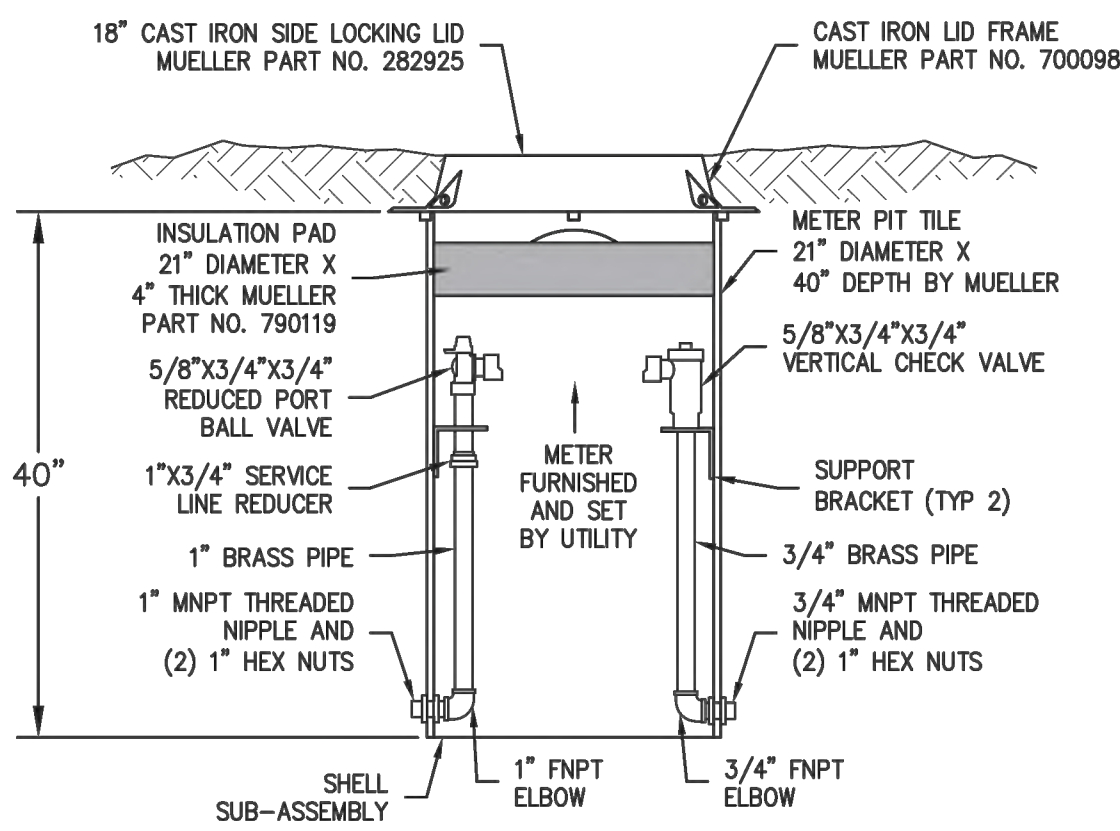


NOTES:
1. RESTRAINED FITTINGS SHALL BE USED IN ADDITION TO POURED CONCRETE THRUST BLOCKING.

MAIN CONNECTION
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

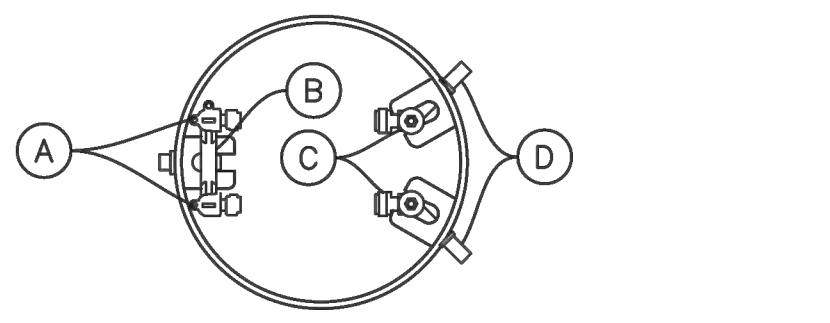
DETAIL NO. DW-18
DATE: JAN 2015



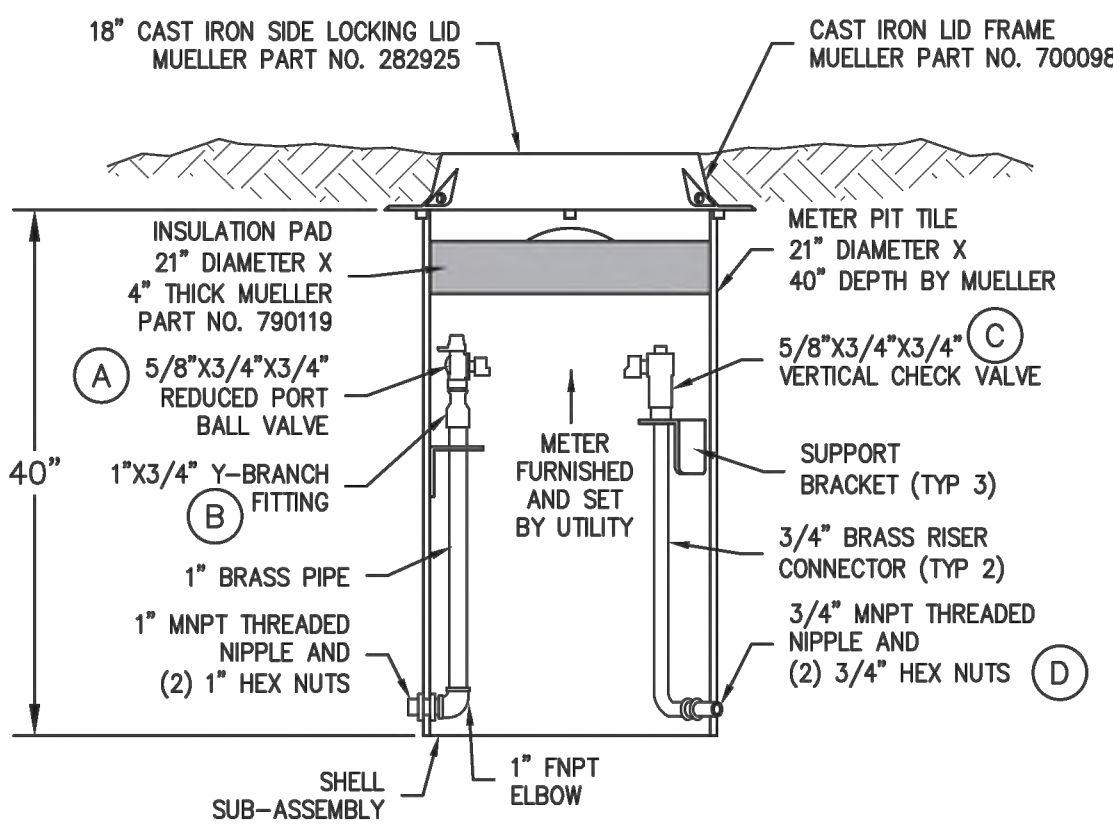
SINGLE METER PIT
(5/8"X3/4")
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED JANUARY 2, 2019

DETAIL NO. DW-20
DATE: JAN 2019
REV DATE:



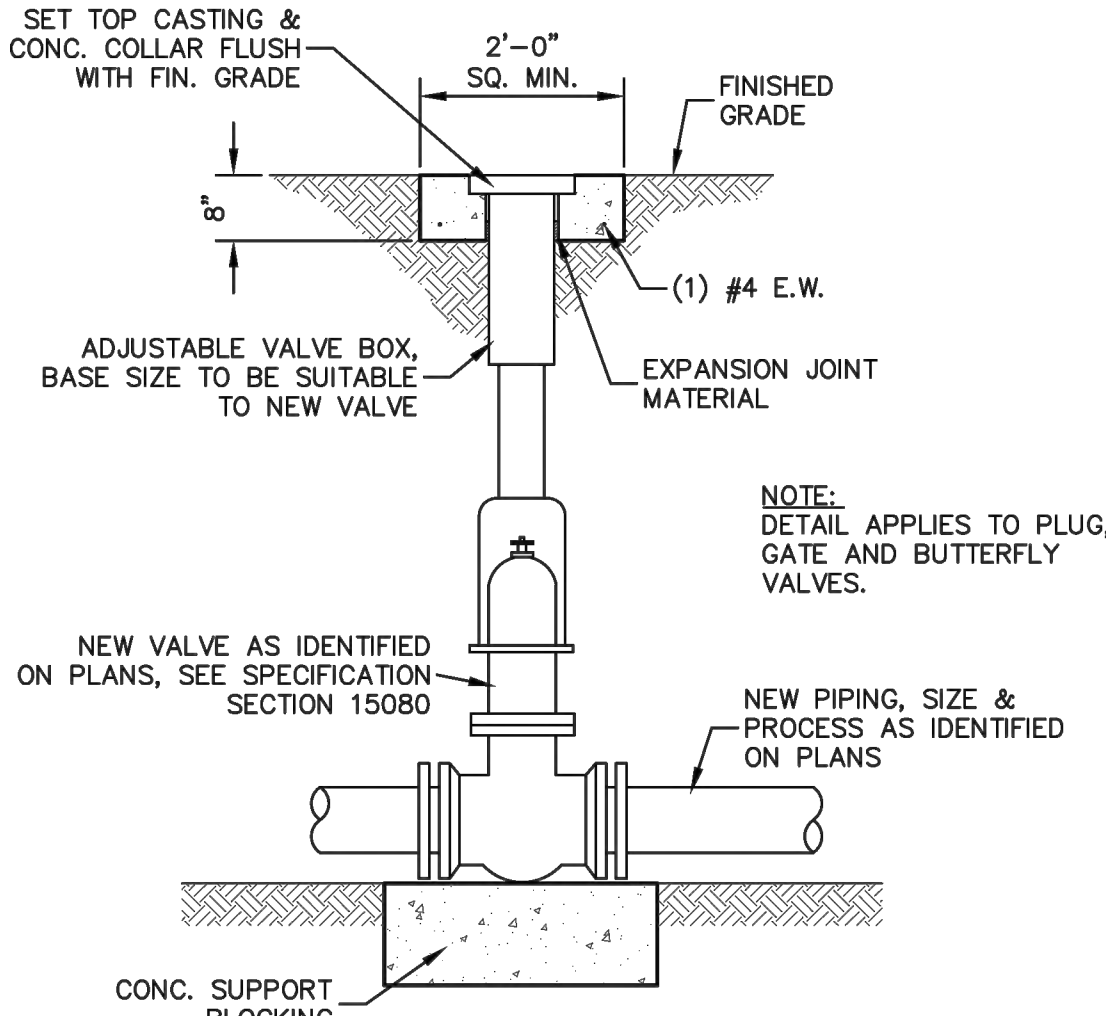
PLAN VIEW
SCALE: NONE



DOUBLE METER PIT
(5/8"X3/4")
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED JANUARY 2, 2019

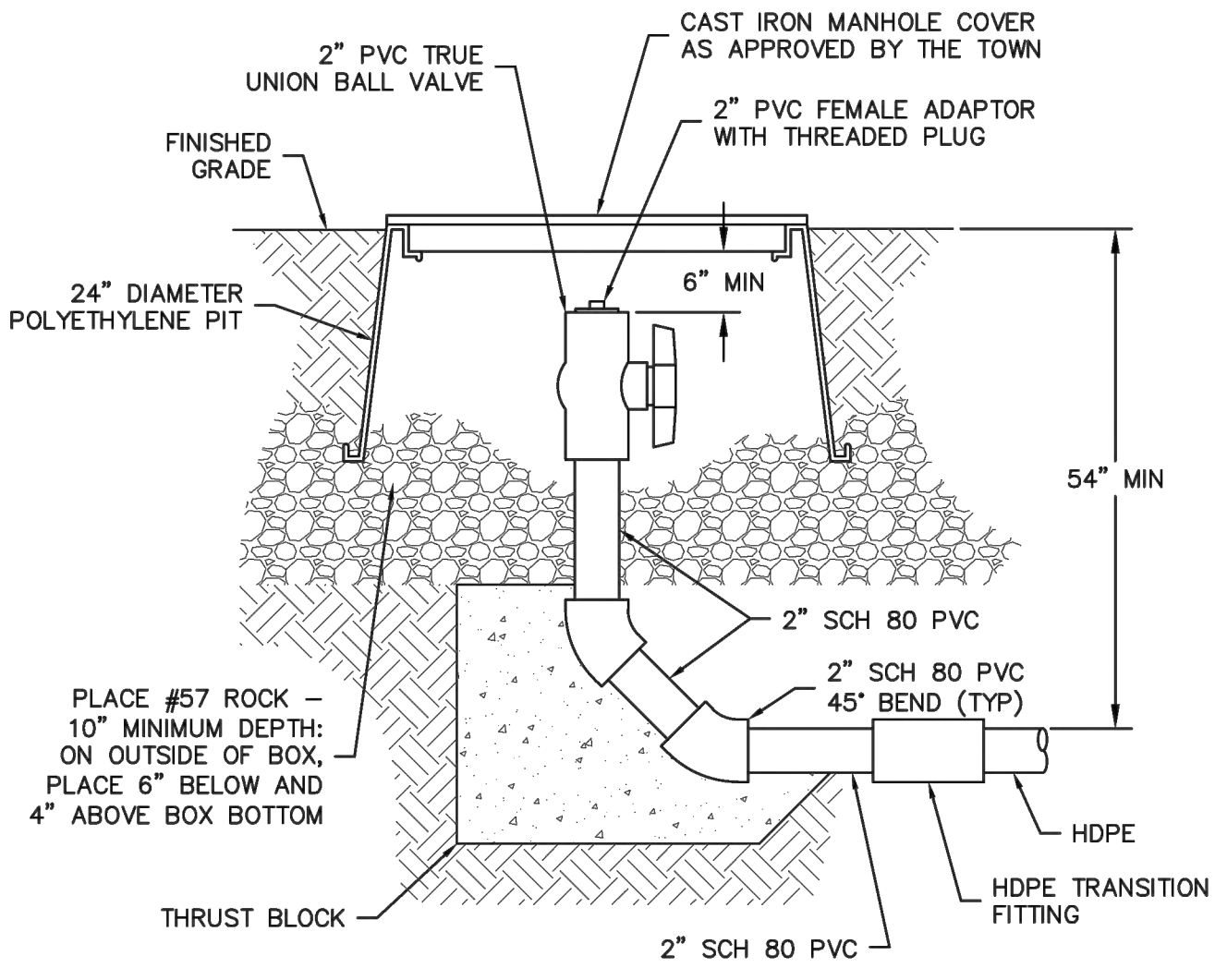
DETAIL NO. DW-21
DATE: JAN 2019
REV DATE:



VALVE & BOX DETAIL
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. SS-22
DATE: JAN 2015



BLOW-OFF VALVE DETAIL FOR NON-TRAFFIC BEARING AREAS
SCALE: NONE

TOWN OF BARGERSVILLE, INDIANA APPROVED SEPTEMBER 25, 2018

DETAIL NO. SS-35
DATE: JAN 2015



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PROJECT NO.	W21.0353
DWG NAME	C702 Water Main Details
DESIGNED BY	SCS
DRAWN BY	MEN
CHECKED BY	JP
DATE	05-03-2022

APPROVAL PENDING
NOT FOR CONSTRUCTION

LENNAR
DEERFIELD SECTION 1
RUNYON ROAD, NORTH OF OLIVE BRANCH ROAD, JOHNSON COUNTY, IN
WATER MAIN DETAILS
Section 3, Township 13 North, Range 3 East, White River Township, Johnson County, Indiana

SHEET NO.
C702
PROJECT NO.
W21.0353