

1316 COUNTY-CITY BUILDING  
227 W. JEFFERSON BOULEVARD  
SOUTH BEND, INDIANA 46601-1830



PHONE 574/ 235-9251  
FAX 574/ 235-9171

CITY OF SOUTH BEND JAMES MUELLER, MAYOR  
**BOARD OF PUBLIC WORKS**

September 28, 2021

Mr. Brian Wood  
Westview Capital, LLC  
2186 E. Centre Ave.  
Portage, MI 49002  
[bwood@allenedwin.com](mailto:bwood@allenedwin.com)

RE: Sanitary Sewer Extension Agreement

Dear Mr. Wood:

At its September 28, 2021 meeting, the Board of Public Works approved the above referenced agreement for a sanitary sewer extension at Inverness Woods.

In accordance with the agreement, please forward the following document **within ten (10) business days of the execution of this agreement** to my attention at [lhensley@southbendin.gov](mailto:lhensley@southbendin.gov):

- 1) Certificate of Insurance naming the City of South Bend as an additional insured.

If you have any further questions regarding this matter, please call this office at (574) 235-9251.

Sincerely,

*/s/ Anne Fuchs*

Anne Fuchs, Clerk

Enclosures  
AF/lh

## **SANITARY SEWER EXTENSION AGREEMENT**

This Sanitary Sewer Extension Agreement (“Agreement”) is made on the 28th. day of September, 2021 by and between Fairway, L.L.C. (“Owner”) and the City of South Bend, a municipal corporation existing under the laws of Indiana, acting by and through its Board of Public Works (“City”).

**WHEREAS**, Owner intends to develop 15 acres of real estate located within St. Joseph County, Indiana; and

**WHEREAS**, Owner plans to extend and make additions to existing sanitary sewer systems to serve said development as shown on the Exhibit A, attached and incorporated hereto (the "Dedicated Improvements"), and desires certain commitments from City; and

**WHEREAS**, the engineering design for said Dedicated Improvements has been, or will be, accomplished by competent professional engineers registered and licensed in the State of Indiana; and

**NOW, THEREFORE**, in consideration of the obligations, terms and conditions contained herein, the adequacy of which the parties expressly acknowledge, Owner and the City agree as follows:

### **1. Recitals**

The parties hereto acknowledge and agree that the foregoing recitals are incorporated herein as a part of this Agreement.

### **2. Construction Inspection**

The Owner has provided the City with Exhibit A, which depicts drawings of the Dedicated Improvements, which the City acknowledges conforms to the City's standards. The Owner shall allow the City to inspect the Dedicated Improvements during construction to ensure conformance to the agreed standards set forth in Exhibit A, in particular with regard to area planning requirements, adequacy of design, and quality of construction. The Owner shall contact the City's Engineering Department at least two (2) business days in advance to arrange for the attendance of a City inspector at key milestones throughout work. Key milestones shall include but not limited to: mandrel deflection testing and sanitary sewer taps. The Owner agrees to perform any necessary adjustments as reasonably requested by the City to ensure the Dedicated Improvements are constructed in accordance with Exhibit A.

### **3. Permits**

It shall be Owner's sole responsibility and expense to obtain any and all permits associated with the construction and installation of the Dedicated Improvements and to comply with all applicable laws.

### **4. Engineer's Estimate**

The Owner has provided an Engineer's Estimate (See Exhibit B, incorporated herein by reference and attachment) for the cost to construct the sanitary sewer main portion of the Dedicated Improvements, including but not limited to, excavation, pipe materials, and all other appurtenant materials, supplies and equipment, permit fees, backfill and bedding.

### **5. Performance Bond**

Owner shall provide the City with a performance bond for an amount equal to one hundred twenty-five percent (125%) of the construction cost covering all work performed or to be performed pursuant to this Agreement. Owner's failure to provide the performance bond, as prescribed herein, shall cause this Agreement to be immediately terminated and of no effect, without the requirement of notice. The performance bond shall be provided concurrently with the execution of this Agreement and attached as Exhibit C.

## **6. Maintenance Bond**

Within ten (10) days of City's acceptance of the Dedicated Improvements, Owner shall provide the City with a maintenance bond equal to ten percent (10%) of the construction cost covering all work performed or to be performed pursuant to this Agreement, and such bond shall remain in effect for three (3) years after dedication as described in Section 10 below.

## **7. Term**

Except as otherwise provided herein, this Agreement shall continue for a period of sixteen (16) months from the Effective Date of this Agreement, or upon the issuance of the relevant occupancy permit(s), whichever occurs last.

## **8. Dedication**

Upon completion of the construction of the Dedicated Improvements substantially as depicted in Exhibit A, the Owner shall dedicate to the City the Dedicated Improvements as public infrastructure. The Owner shall use its best efforts to work with the City to ensure that the Dedicated Improvements are dedicated to the City in a timely manner.

Additionally, prior to dedication, the following must be satisfied:

- a. All parts and labor must meet the standards and requirements stated in the design specifications as presented to and accepted by the City's Engineering Department.
- b. Lien waivers must be received with regard to all workmanship and materials used in connection with these improvements.
- c. The Completion Affidavit must be furnished to Owner by the South Bend, Indiana Board of Public Works.
- d. Owner must provide copies of test reports or cut sheets on all materials supplied.
- e. Owner must provide As-Built drawings in accordance with the City of South Bend Prevailing Specifications for Public Works, which may be found at <https://southbendin.gov/wp-content/uploads/2020/05/Prevailing-Supplemental-Specifications.pdf>

Owner's failure to comply with this Section 8 shall be a material breach of this Agreement.

## **9. System Development Charges**

Simultaneously with the execution of this Agreement, the Owner shall pay the City a sum of \$34,006.50 (thirty four thousand, six dollars and 50/100) for access to the City's sanitary sewer systems set forth as Exhibit D. For purposes of this section 9 of the Agreement, an equivalent residential unit ("ERU") shall mean a single-family residence. For purposes of customers that are not single-family residences, one ERU shall equal estimated wastewater flows of 310 gallons per day, respectively. No customer will be less than one ERU.

For every new connection to the South Bend Municipal Sewer Works, a capital contribution of \$1,145 shall be collected per ERU. For every new connection to the South Bend Municipal Water Works, a system development charge of four hundred seventy-five dollars (\$475.00) shall be collected per ERU and additional portion thereof to be connected. All charges shall be paid to

the City at the time the application for connection is filed. For all other types of structures, the ERU calculation shall be based upon the ratio of Average Daily Flow as computed pursuant to 327 IAC 3-6-11 in relationship to 310 gallons per day. For structures not listed in 327 IAC 3-6-11, the ERU shall be calculated as the relationship between the Average Daily Flow reported in the sewer capacity certification for the structure and 310 gallons per day.

For customers with greater than 20 ERUs, the ERU shall be adjusted based upon the Peaking Factor as computed herein. The Peaking Factor shall be calculated by dividing the Peak Daily Flow by the Average Daily Flow, h as reported in the sewer capacity certification. In no event will a Peaking Factor less than 2.0 be used for purposes of the adjustment. The Peaking Factor divided by 4.0 (the Peaking Factor for residential connections) will be multiplied by the number of ERUs for purposes of computing the capital contribution owed by the customer. The City reserves the right to require an additional capital contribution should Owner's flow rate exceed the predicted level. Such additional capital contribution will be based on the proportional share of Owner's use of the City's sewer sanitary system.

#### **10. Waiver of Remonstrations**

Owner agrees to waive its right to remonstrate and hereby consents to annexation. Further, Owner agrees to execute a petition of annexation upon request by the City.

#### **11. Indemnification**

Owner agrees and undertakes to indemnify and hold the City, and its respective agents, employees, successors, and assigns, harmless from any liability, loss, costs, damages or expenses, including attorneys' fees, which the City may suffer or incur as a result of any claims or actions which may be brought by any person or entity arising out of this Agreement. If any action is

brought against the City or its respective agents, employees, successors, or assigns, in connection with this Agreement, Owner agrees to defend such action or proceedings at its own expense and to pay any judgment rendered therein.

## **12. Insurance**

Owner, or the owner's contractor, at Owner's sole expense, shall maintain during the term of this Agreement, commercial general liability insurance covering the Owner and the Dedicated Improvements in an amount not less than Five Million Dollars (\$5,000,000.00) per occurrence. Owner agrees to provide to the City a certificate of insurance evidencing such coverage within ten (10) days of the execution hereof.

## **13. Assignment**

This Agreement may not be assigned by the Owner without the express written consent of the City which such consent may be withheld for any reason. Any violation of this limitation shall terminate the City's obligation and forfeit the Owner's rights under this Agreement.

## **14. Material Breach**

In the event either party breaches any of the provisions set forth herein, the non-breaching party shall provide written notice of the breach to the breaching party. Upon receipt of the notice, the breaching party shall use its good faith efforts to cure the breach as soon as practical. In the event the breach is not cured within a reasonable amount of time, the non-breaching party may terminate this Agreement and pursue its legal and equitable remedies.

## **15. Governing Law and Jurisdiction**

This Agreement shall be construed and interpreted according to the laws of the State of Indiana and shall be enforced in any court of competent jurisdiction in St. Joseph County, Indiana. It is

further agreed that all provisions of law now or hereafter in effect relating to sewer service by the City shall be applicable to this Agreement.

#### **16. Severability**

Wherever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

#### **17. Waiver**

No provision of this Agreement will be deemed waived, unless such waiver will be in writing and signed by the party against which the waiver is sought to be enforced. The waiver will not be construed to be a waiver of any succeeding breach of any such provision, a waiver of the provision itself, or a waiver of any other provisions of this Agreement. No delay or omission on the part of either party to exercise or avail itself of any right, power, or privilege that it has or may have under this Agreement will operate as a waiver of any breach or default.

#### **18. Time**

Time is of the essence of this Agreement.

#### **19. Entire Agreement**

This Agreement sets forth the entire agreement and understanding between the Owner and the City as to the subject matter hereof, and merges and supersedes all prior discussions, agreements, and understanding of any and every nature between them.

#### **20. Corporate Authority**



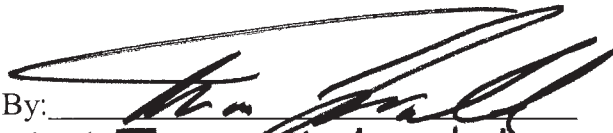
The person signing on behalf of the Owner represents that he/she has been duly authorized to execute this Agreement on behalf of said Owner.

**IN WITNESS WHEREOF**, the Owner and the City, through their duly authorized representatives, have caused this Agreement to be executed as of the day and year first written above. The parties have read and understand the foregoing terms of this Agreement and do, by their respective signatures hereby agree to its terms.

*(Remainder of page intentionally left blank)*

IN WITNESS WHEREOF, the Owner and the City, through their duly authorized representatives, have caused this Agreement to be executed as of the date first written above. The parties have read and understand the foregoing terms of this Agreement and do, by their respective signatures, hereby agree to its terms.

"OWNER"  
Westview Capital, LLC.

By:   
Printed: Thomas M. Larabel  
Title: VICE PRESIDENT

**CITY OF SOUTH BEND, INDIANA  
BOARD OF PUBLIC WORKS**



Elizabeth A. Maradik, President



Gary A. Gilot, Member



Jordan V. Gathers, Member



Joseph R. Molnar, Member



Murray L. Miller, Member

ATTEST:



Anne Fuchs, Clerk

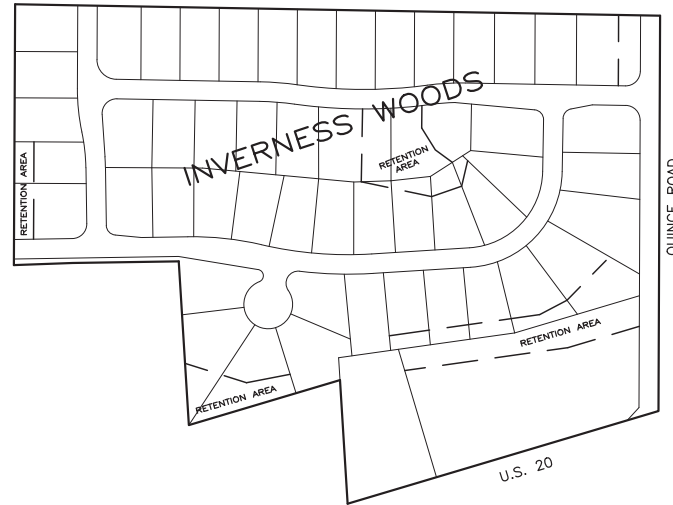
Date: September 28, 2021

EXHIBIT A

DEDICATED IMPROVEMENTS

# CITY OF SOUTH BEND, INDIANA DEPARTMENT OF PUBLIC WORKS

PROJECT:     SEWER     WATER     TRAFFIC     STREET     OTHER



**SITE PLAN**  
NOT TO SCALE



**AREA LOCATION MAP**  
NOT TO SCALE

## INVERNESS WOODS PROJECT NO. 21-0242

DURNES WOODS DRIVE FROM STA 1+00 TO STA 12+74.43	1,174.43 LF	0.22 MI
ERNE COURT FROM STA 1+00 TO STA 1+96.97	96.97 LF	0.02 MI
GIBBONS DRIVE FROM STA 1+00 TO STA 11+50	1,050.00 LF	0.20 MI
LARNE DRIVE FROM STA 11+50 TO STA 14+63.67	313.67 LF	0.06 MI
LIMERICK DRIVE FROM STA 1+00 TO STA 5+97.85	497.85 LF	0.09 MI

CITY OF SOUTH BEND, INDIANA  
BOARD OF PUBLIC WORKS

<p><i>Elizabeth A. Maradik</i> Elizabeth A. Maradik, President</p> <p><i>Gary A. Gilot</i> Gary A. Gilot, Member</p> <p><i>Joseph R. Molnar</i> Joseph R. Molnar, Member</p>	<p><i>Jordan V. Gathers</i> Jordan V. Gathers, Member</p> <p><i>Murray L. Miller</i> Murray L. Miller, Member</p> <p>Attest: Anne Fuchs, Clerk Date: <u>September 28, 2021</u></p>
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RECOMMENDED BY CITY STAFF	DATE
<i>Kara M. Boyles</i> KARA BOYLES, P.E.	9/24/2021 CITY ENGINEER
<i>Kyle W. Silveus</i> KYLE SILVEUS, P.E.	9-22-2021 ASSISTANT CITY ENGINEER
MICHAEL P. DIVITA, AICP	PLANNING
<i>Toy Villa</i> TOY VILLA	09/22/2021 CONSTRUCTION

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SHEET 7	PLAN & PROFILE - LIMERICK DRIVE
SHEET 8	PLAN & PROFILE - GIBBONS DRIVE
SHEET 9	PLAN & PROFILE - GIBBONS DR. / LARNE DR. / ERNE CT.
SHEET 10	STORM SEWER DETAILS
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SHEET 12-17	EROSION CONTROL PLAN & DETAILS

**STANDARD DRAWINGS**  
SEE DETAIL SHEETS

CITY OF SOUTH BEND, INDIANA, PREVAILING SPECIFICATIONS LATEST EDITION,  
TO BE USED WITH THESE PLANS.

**ABONMARCHE**

315 Jefferson Boulevard  
South Bend, IN 46601  
T 574.232.8700  
F 574.251.4440  
abonmarche.com

Battle Creek  
Benton Harbor  
Lafayette  
South Bend

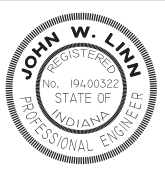
Goshen  
Hobart  
South Haven  
Valparaiso

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PLANS PREPARED FOR:  
**FAIRWAY, L.L.C.**  
1620 NORTH IRONWOOD DRIVE  
SOUTH BEND, INDIANA 46635

*John W. Linn*  
JOHN W. LINN  
PROFESSIONAL ENGINEER NO. PE19400322

06-29-2021  
DATE

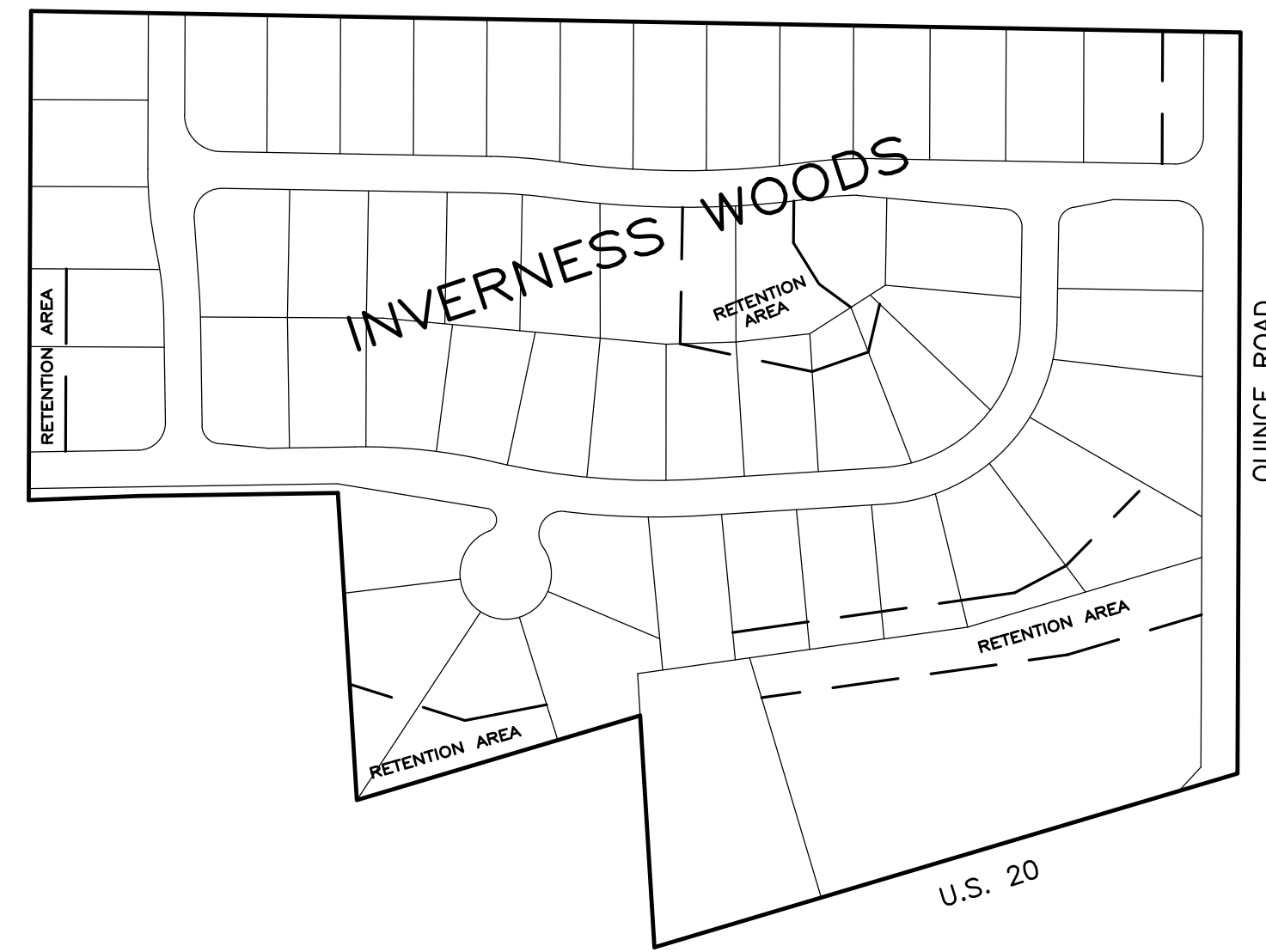


# ST. JOSEPH COUNTY, INDIANA

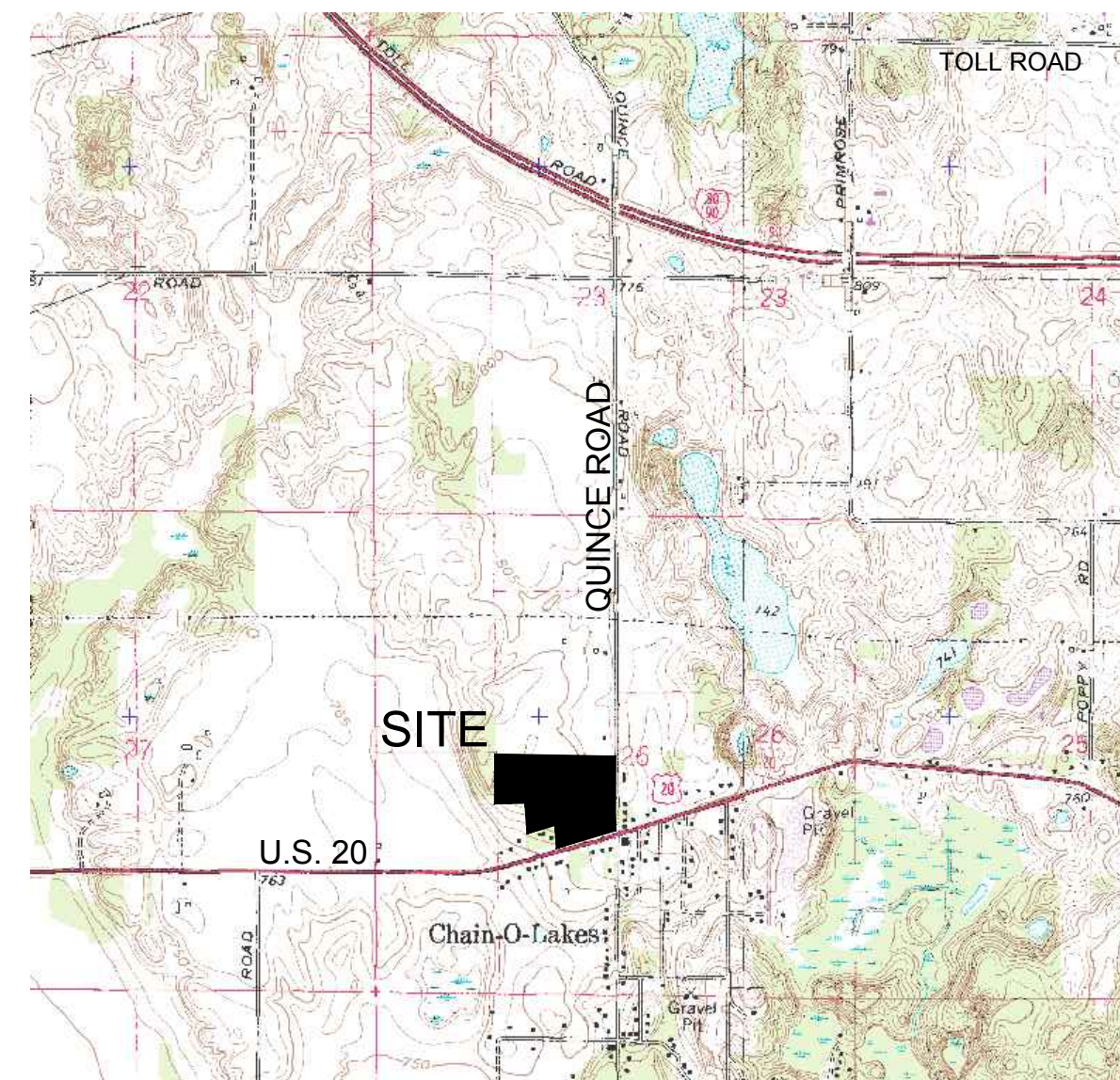
## INVERNESS WOODS

WARREN TOWNSHIP

PART OF THE EAST HALF OF THE SOUTHWEST QUARTER, SECTION 26, TOWNSHIP 38 NORTH, RANGE 1 EAST



**SITE PLAN**  
NOT TO SCALE



**AREA LOCATION MAP**  
NOT TO SCALE

DURNESS WOODS DRIVE FROM STA 1+00 TO STA 4+79.34	379.34 LF	0.07 MI
ERNE COURT FROM STA 1+00 TO STA 1+96.97	96.97 LF	0.02 MI
GIBBONS DRIVE FROM STA 1+00 TO STA 11+50	1,050.00 LF	0.20 MI
LARNE DRIVE FROM STA 11+50 TO STA 12+16.82	66.82 LF	0.01 MI
LIMERICK DRIVE FROM STA 1+00 TO STA 5+97.85	497.85 LF	0.09 MI

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SHEET 10	STORM SEWER DETAILS
SHEET 11	SANITARY SEWER DETAILS
SHEET 12-17	EROSION CONTROL PLAN & DETAILS

ST. JOSEPH COUNTY STANDARD DRAWINGS

SEE DETAIL SHEETS

DISTRICT NUMBER ONE (1) COMMISSIONER ANDREW KOSTIELNEY	DISTRICT NUMBER TWO (2) COMMISSIONER DAVE THOMAS	DISTRICT NUMBER THREE (3) COMMISSIONER DEBORAH FLEMING, DMD
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PRIMARY PLAT APPROVAL

DATE JUNE 3, 2004

APPROVED BY COUNTY ENGINEER FOR CONFORMANCE WITH ORDINANCE AND NO RESPONSIBILITY IS ACCEPTED FOR DESIGN.

DATE

DEVELOPED BY:

**FAIRWAY, L.L.C.**  
1620 NORTH IRONWOOD DRIVE  
SOUTH BEND, INDIANA 46635

DRAWINGS BY:



**ABONMARCHE CONSULTANTS, L.L.C.**

315 W Jefferson Blvd.  
South Bend, Indiana 46601  
(574) 232-8700  
FAX: (574) 251-4440

Fort Wayne, Indiana  
Benton Harbor, Michigan

ENGINEERING / LAND SURVEYING / PLANNING / CONSTRUCTION SERVICES

*John W. Linn*  
JOHN W. LINN  
PROFESSIONAL ENGINEER NO. PE19400322

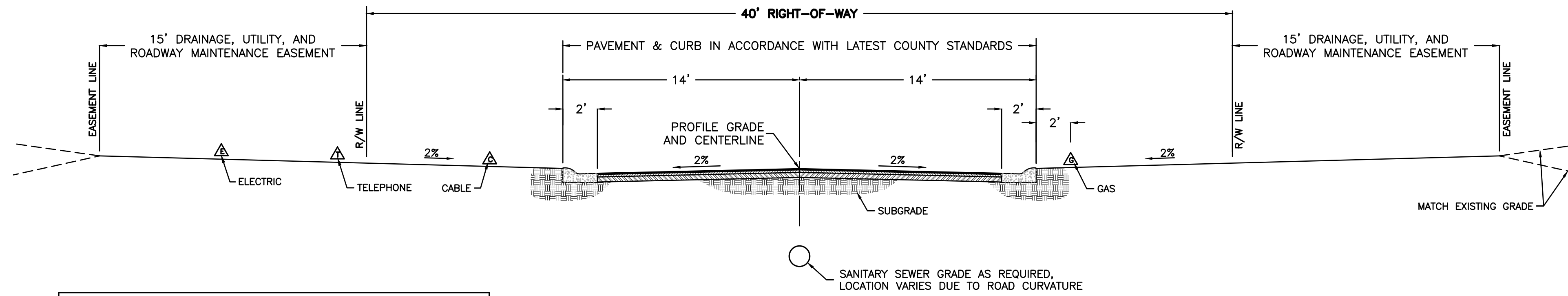
06-29-2021  
DATE



ST. JOSEPH COUNTY, INDIANA SPECIFICATIONS,  
LATEST EDITION, TO BE USED WITH THESE PLANS

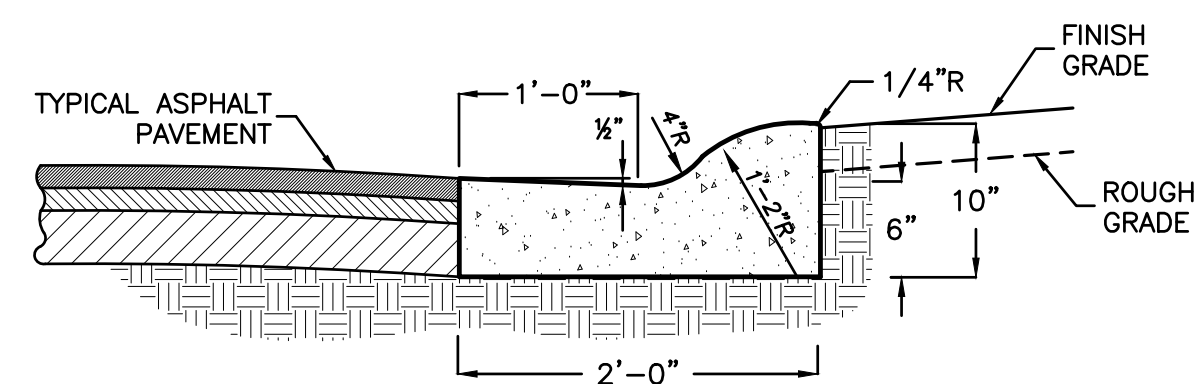
**PAVEMENT NOTES**

- ASPHALT SHALL MEET 2021 INDOT SPECIFICATIONS, AS CURRENTLY REVISED, ON AGGREGATE SIZE.
  - HMA SURFACE, 9.5MM MAINLINE, PG 70-22, TYPE 'B'
  - HMA INTERMEDIATE, 12.5MM, MAINLINE, PG 64-22, TYPE 'B'
  - HMA BASE, 25MM, MAINLINE, PG 64-22, TYPE 'B'
- HMA BASE MAY CONTAIN LOCAL AGGREGATES.



MINIMUM PAVEMENT THICKNESS				
CLASSIFICATION	HMA SURFACE	HMA BINDER	HMA BASE	COMPACTED AGG. BASE, NO. 53
Local Street	1.5"	2"	4"	6"

**ROADWAY SECTION (LOCAL)**  
-NOT TO SCALE-



**COMBINATION CURB AND GUTTER, TYPE A**  
-NOT TO SCALE-

**BENCH MARKS:**

- PK NAIL IN WEST FACE OF UTILITY POLE #J180-142 LOCATED ON THE EAST SIDE OF QUINCE ROAD, DIRECTLY ACROSS FROM THE PROPOSED ENTRANCE FOR INVERNESS WOODS. ELEV. = 792.39
- PK NAIL IN WEST FACE OF UTILITY POLE #J180-175 LOCATED ON THE EAST SIDE OF QUINCE ROAD, DIRECTLY ACROSS FROM PROPOSED STORM STRUCTURE #4. ELEV. = 790.17

**GENERAL NOTES:**

- ALL LOTS SHALL BE SERVICED BY MUNICIPAL SEWER AND INDIVIDUAL WELLS.
- NO SUBSTITUTION IN ANY MATERIAL, OR ANY DEVIATION IN THE PLANS IS PERMITTED WITHOUT WRITTEN APPROVAL FROM ABONMARCHÉ CONSULTANTS.
- NO WORK SHALL BE PERFORMED WITHIN THE PROPOSED RIGHT-OF-WAY LIMITS UNTIL APPROVED PLANS HAVE BEEN OBTAINED, AND NOTIFICATION OF INTENT TO COMMENCE WORK 48 HOURS PRIOR.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY CONSTRUCTION PERMITS.
- AN APPROVED SET OF PLANS IS REQUIRED TO BE ON-SITE AT ALL TIMES WITH A COMPETENT SUPERINTENDENT ABLE TO MAKE DECISIONS.
- ALL UTILITIES, SUCH AS NATURAL GAS, ELECTRIC, TELEPHONE, AND CABLE TELEVISION, SHALL BE UNDERGROUND.
- CONTRACTOR SHALL PERFORM COMPACTION TESTING ACCORDING TO ST. JOSEPH COUNTY.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHOULD INQUIRE ALL UTILITY COMPANIES FOR UNDERGROUND CONDUITS. ANY DAMAGES DONE TO PUBLIC AND OR PRIVATE PROPERTIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ANY DISTURBED PAVEMENT, PAVEMENT TO BE REMOVED, CURB AND GUTTER, ETC., SHALL BE SAW CUT AND REPLACED USING THE SAME TYPE OF MATERIAL AND BROUGHT BACK TO ITS ORIGINAL GRADE AND ALIGNMENT.
- ONE (1) SET OF SIGNED AS-BUILT DRAWINGS SHALL BE FURNISHED TO ST. JOSEPH COUNTY ENGINEERING AND SURVEYOR, AND CITY OF SOUTH BEND ENGINEERING UPON COMPLETION OF CONSTRUCTION AND AT TIME OF FINAL INSPECTION.
- NO CLOSING OF STREETS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL FROM ST. JOSEPH COUNTY ENGINEERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING PRECAUTIONS TO PROTECT THE WORK AND SAFETY OF THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL NECESSARY BARRICADES, SUITABLE AND SUFFICIENT LIGHTS, DANGER SIGNALS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
- THE CONTRACTOR SHALL CONTACT ST. JOSEPH COUNTY ENGINEERING FOR TESTING REQUIREMENTS. SOIL AND/OR PAVEMENT DENSITY TESTS MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE.
- PER ST. JOSEPH COUNTY STANDARDS FOR ROADWAY AND STORM SEWER, THE MINIMUM SOIL COMPACTION REQUIREMENTS, USING MODIFIED PROCTOR, FOR BACKFILL MATERIAL AND PAVEMENT SUBGRADE WILL BE AS FOLLOWS:
 

SUBGRADE UNDER PAVEMENT AND CURBS	100%
TOPSOIL USED IN ALL BUT THE TOP SIX INCHES (6") OF FILLS IN AREA SPECIFIED	90%
EXISTING GROUND RECEIVING FILLS	95%
BACKFILL IN PIPE AND CONDUIT TRENCHES UNDER PAVEMENTS AND CURBS (6" LIFTS)	100%
ALL OTHER AREAS RECEIVING FILL (12" LIFTS)	95%
- NOTE: FOR SANITARY SEWER BACKFILL REQUIREMENTS, SEE SANITARY SEWER DETAIL SHEET FOR MINIMUM SOIL COMPACTION REQUIREMENTS PER CITY OF SOUTH BEND.
- ST. JOSEPH COUNTY ENGINEERING SHALL FIELD VERIFY THE CONTRACTOR'S CURB AND GUTTER MOLD PRIOR TO THE PLACEMENT OF ANY CURB.

**STORM SEWER:**

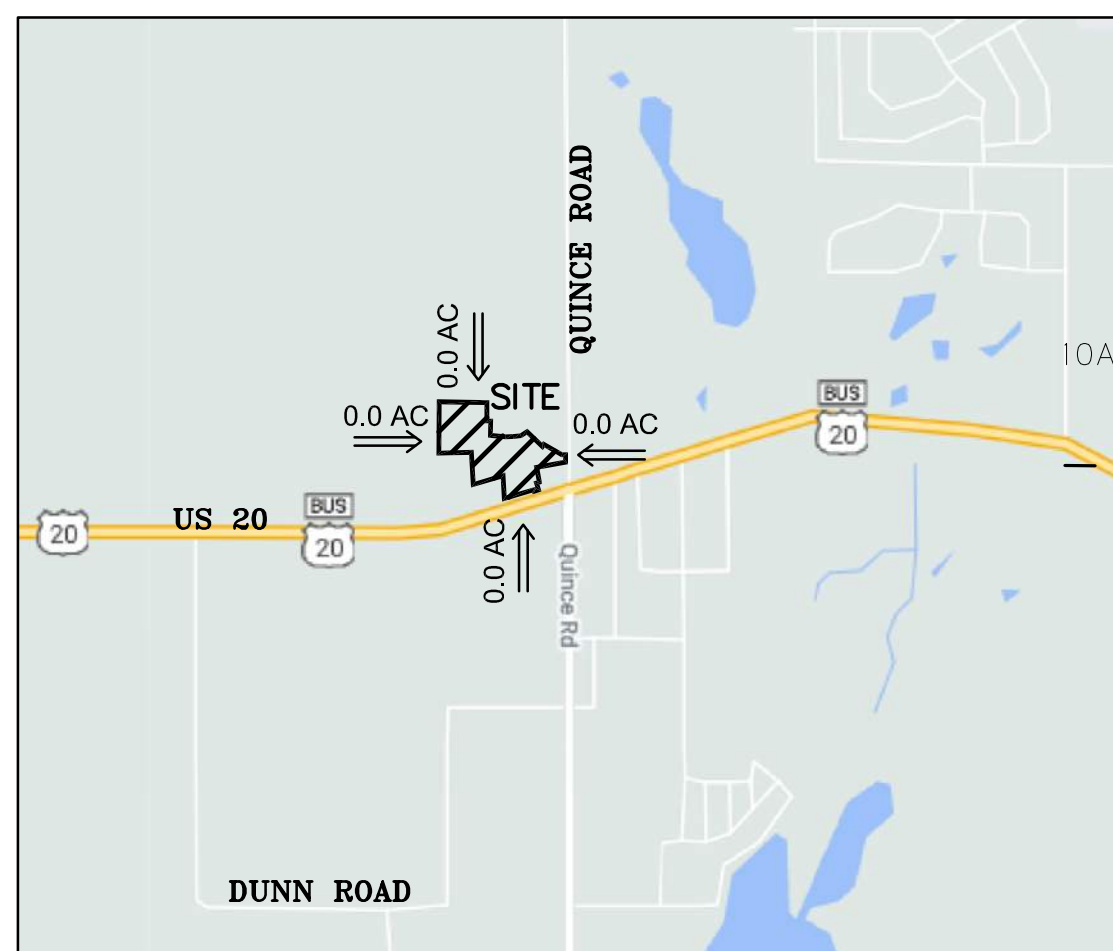
- ST. JOSEPH COUNTY DESIGN STANDARDS AND SPECIFICATIONS ARE TO BE USED.
- STORM SEWER SHALL BE REINFORCED CONCRETE PIPE (RCP) CLASS III MIN.
- MANHOLES SHALL BE A MINIMUM OF 48" PRE-CAST CONCRETE CONFORMING TO ASTM C-478 AND GOVERNMENTAL DESIGN STANDARDS STATED ABOVE.
- ALL TERMINATING PIPES SHALL BE PROVIDED WITH END SECTIONS AND PROTECTED AGAINST EROSION WITH RIPRAP STONE.
- ALL CASTINGS IN THE ROADWAY ARE TO BE INSTALLED TO INTERMEDIATE GRADE, FLUSH WITH THE ASPHALT, TO PREVENT PROBLEMS WITH PLOWS. THE STRUCTURES WILL NEED TO BE RAISED TO SURFACE GRADE AT THE TIME OF PAVING SURFACE.

**EARTHWORK:**

- ALL TOPSOIL SHALL BE REMOVED FROM THE ROADWAY BEFORE PAVEMENT IS CONSTRUCTED.
- EXPOSED SUBGRADE SHALL BE PROOF ROLLED TO DETERMINE UNSUITABLE SOIL LOCATIONS. ANY UNSUITABLE SOIL SHALL BE EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
- ALL TESTING SHALL BE DONE BY A QUALIFIED SOIL TESTING FIRM APPROVED BY THE OWNER.
- A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OUTSIDE BUILDING AND ROADWAY AREAS.
- ALL AREAS RECEIVING TOPSOIL SHALL BE FERTILIZED, SEEDDED AND MULCHED TO PREVENT EROSION. IT IS THE RESPONSIBILITY OF THE EARTHWORK CONTRACTOR TO CONFORM TO INDIANA "RULE 5" REGARDING EROSION CONTROL.
- STRAW BALES OR SILT FENCE ARE REQUIRED AROUND EACH STORM SEWER INLET DURING CONSTRUCTION.
- POSITIVE DRAINAGE DURING CONSTRUCTION IS REQUIRED TO PREVENT ANY PONDING OF WATER OR ENCROACHMENT ONTO ADJACENT PROPERTY.

# INVERNESS WOODS, PHASE 2 SECONDARY PLAT

A PART OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 26,  
TOWNSHIP 38 NORTH, RANGE 1 EAST, WARREN TOWNSHIP, ST. JOSEPH COUNTY INDIANA



**LOCATION/WATERSHED MAP**  
SCALE: 1"=2000'

**NOTES:**

1. AREA OF SUBDIVISION = 15.00 ACRES  
AREA TO BE DEDICATED = 2.04 ACRES
2. ALL EASEMENTS THAT ARE INDICATED ON DOCUMENTATION PROVIDED BY THE PROPERTY OWNER ARE SHOWN HEREON.
3. EROSION CONTROL PLANS WILL BE FILED WITH THE RESPECTIVE GOVERNING AGENCIES.
4. ALL LOTS WILL BE GOVERNED BY RESTRICTIVE COVENANTS.
5. ENGINEERING REPORT: ALL LOTS ARE PROPOSED TO BE SERVICED BY INDIVIDUAL WELL & MUNICIPAL SANITARY SEWER. THE STREETS AND STORM WATER DRAINAGE SYSTEM WILL BE DESIGNED ACCORDING TO THE LATEST ST. JOSEPH COUNTY STANDARDS.
6. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FEDERAL INSURANCE RATE (FIRM) MAPS, THE SUBJECT PROPERTY IS LOCATED IN ZONE X, AREA OF MINIMAL FLOOD HAZARD, MAP PANEL NUMBERS 18141C0160D WITH AN EFFECTIVE DATE OF JANUARY 6, 2011.
7. THE DRAINAGE AND UTILITY EASEMENTS DELINEATED ON THIS PLAT ARE EASEMENTS RESERVED TO THE DEVELOPER OF SAID SUBDIVISION, ITS SUCCESSORS, ASSIGNS, THE ST. JOSEPH COUNTY DRAINAGE BOARD, ST. JOSEPH COUNTY BOARD OF COMMISSIONERS AND UTILITY COMPANIES. THE DEVELOPER, ITS SUCCESSORS AND ASSIGNS RESERVE THE RIGHT TO CONSTRUCT AND MAINTAIN CONTINUOUS DRAINAGE FACILITIES, INCLUDING, BUT NOT LIMITED TO, SWALES, PIPES AND DRYWELLS, TO PROVIDE WITHIN SAID EASEMENTS YARD DRAINAGE ON, ACROSS AND BETWEEN, ALL LOTS ON THIS PLAT. THE OWNERS OF THE LOTS CONTAINING SAID EASEMENTS, THEIR SUCCESSOR AND ASSIGNS SHALL TAKE THEIR TITLES SUBJECT TO SAID USE OF THE DRAINAGE AND UTILITY EASEMENTS.
8. THE TEMPORARY TURN-AROUND EASEMENTS DELINEATED ON THIS SUBDIVISION PLAT ARE EASEMENTS RESERVED FOR THE USE AND ENJOYMENT BY THE PUBLIC FOR THE SOLE PURPOSE OF REVERSING VEHICULAR TRAFFIC. UPON THE AREA OF GROUND DESIGNATED HEREIN AND MARKED AS "OUTLOT "A", AND OUTLOT "B", NO PERMANENT OR OTHER STRUCTURES ARE TO BE ERRECTED OR MAINTAINED, BUT THE OWNER(S), THEIR SUCCESSORS AND ASSIGNS, OF SAID REAL ESTATE SHALL TAKE THEIR TITLES SUBJECT TO THE RIGHTS OF SAID EASEMENT. THE EXISTENCE OF, AND RIGHTS TO, SAID EASEMENT WILL BE AUTOMATICALLY RELEASED UPON THE EXTENSION OF DURNESS WOODS DRIVE TO THE WEST AND LARNE DRIVE TO THE SOUTH.
9. ACCORDING TO THE 1999 ST. JOSEPH COUNTY POTENTIAL GROUNDWATER CONTAMINATION SITES MAP PUBLISHED BY THE MICHIANA AREA COUNCIL OF GOVERNMENTS, NO DOCUMENTED DUMPSITES, LANDFILLS, SITES USED FOR DISPOSING OF HAZARDOUS SUBSTANCES, OR WELL HEAD PROTECTION AREAS, EXIST ON-SITE OR ADJACENT TO THE SITE.
10. BUILDING SETBACK LINES SHALL CONFORM TO APPLICABLE PROVISIONS OF THE ZONING ORDINANCE UNLESS THE PROPER VARIANCES ARE GRANTED BY THE AREA BOARD OF ZONING APPEALS.
11. THERE ARE NO ENCROACHMENTS OF EXISTING STRUCTURES UPON LOT LINES, BUILDING SETBACKS OR EASEMENTS CREATED IN THE PLATTING OF HEREIN SUBDIVISION. ALL EXISTING STRUCTURES WILL BE REMOVED FROM ANY PROPOSED LOT(S) PRIOR TO SECONDARY PLATTING SAID LOT(S).
12. THE BOUNDARY SURVEY OF THE PARENT PARCEL IS RECORDED UNDER INSTRUMENT NUMBER 0635187 IN THE OFFICE OF THE ST. JOSEPH COUNTY RECORDER. EXISTING MONUMENTS ARE SHOWN ON SAID SURVEY.
13. ON THE DATE OF THE APPROVAL OF THE PRIMARY PLAT, THE PLAT COMMITTEE GRANTED A VARIANCE FROM SECTION 20.12.02.J OF THE ST. JOSEPH COUNTY SUBDIVISION ORDINANCE TO ALLOW A TOTAL OF THREE (3) ACCESSES ACROSS A 5 FOOT NON-ACCESS EASEMENT FOR LOT "A" AND LOT 52. ONE (1) ACCESS WILL BE FOR LOT "A" AND TWO (2) ACCESSES WILL BE FOR LOT 52.
14. THE EXISTING PARCEL ID NUMBERS ARE 021-1038-0627, 021-1038-063017 AND 021-1038-063018.

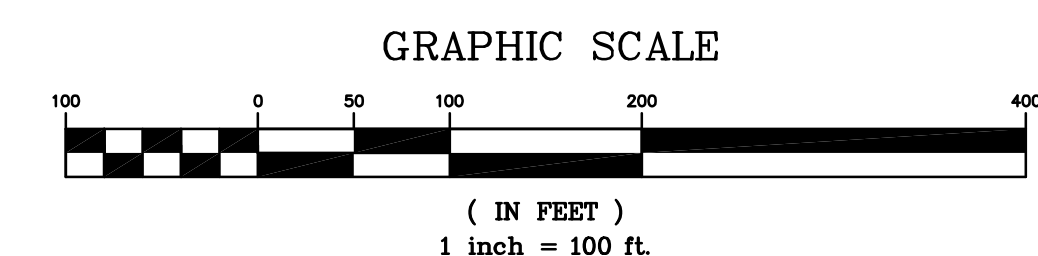
LINE DATA TABLE		
LINE #	LENGTH	BEARING
L1	54.21'	S84°38'14"E
L2	23.29'	N89°06'36"E
L3	71.71'	N89°06'36"E
L4	21.12'	N86°25'12"E
L5	15.14'	N86°25'12"E
L6	9.74'	N79°23'35"E
L7	16.22'	N3°34'48"W
L8	94.44'	S18°58'34"E
L9	54.92'	S80°23'56"E
L10	132.05'	N72°29'48"W
L11	90.97'	S79°00'45"W
L12	104.92'	N71°07'04"E
L13	45.68'	S28°44'09"W
L14	116.18'	N81°59'52"E
L15	252.11'	N81°59'52"E
L16	62.28'	N78°51'21"E
L17	40.54'	S58°38'43"W
L18	25.00'	S81°6'01"W
L19	99.52'	N36°43'59"W
L20	148.08'	S77°06'34"E
L21	65.76'	N68°37'40"E
L22	50.70'	S20°04'23"W
L23	3.89'	S88°58'59"E
L24	12.52'	N0°16'44"E

**STREET CLASSIFICATION:**

- COLLECTOR . . . . . QUINCE ROAD (40' HALF R/W)
- LOCAL . . . . . DURNESS WOODS DRIVE (40'R/W)
- LOCAL . . . . . LIMERICK DRIVE (R/W VARIES)
- LOCAL . . . . . GIBBONS DRIVE (40' R/W)
- CUL DE SAC . . . . . ERNE COURT (40' R/W)

**LEGEND**

- (A) 15' DRAINAGE, UTILITY & ROAD MAINTENANCE EASEMENT
- (B) 30' DRAINAGE EASEMENT, 15' EACH SIDE OF PROPERTY LINE
- (C) 5' NON-ACCESS EASEMENT
- (D) 15' DRAINAGE EASEMENT
- (E) 15' DRAINAGE EASEMENT, 7.5' EACH SIDE OF PROPERTY LINE
- (F) RETENTION EASEMENT

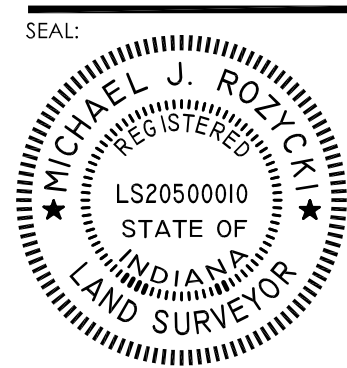


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 Benton Harbor  
 Marquette  
 South Haven  
 Vespera  
 Engineering - Architecture - Land Surveying

**INVERNESS WOODS, PHASE 2  
SECONDARY PLAT**

PROJECT:  
 DRAWN BY: DEF  
 FIELDBOOK:  
 PM REVIEW: RAN  
 QA/QC REVIEW: MJR  
 DATE: 4-26-2021



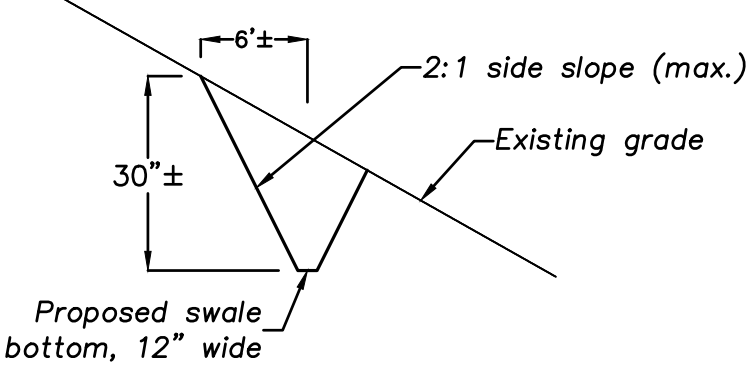
HARD COPY IS INTENDED TO BE 24" X 36" WHEN PLOTTED. SCALE(S) INDICATED AND GRAPHIC QUALITY MAY NOT BE ACCURATE FOR ANY OTHER SIZES.

SCALE:  
 HORZ: 1" = 100'  
 VERT:  
 ACI JOB #: 21-0242  
 SHEET NO. 1 of 2

**SEC. 26-T38N-R1E**







**Section A-A**  
Rear Yard Drainage Swale  
Lots 17-18  
(Scale: 1"=30')

**Retention Basin #2**  
(dry bottom)

Top of Bank Elev. = 785.0  
Design High Water = 784.5  
Bottom = 779.5  
Capacity Provided = 0.58 acre-ft  
Capacity Required = 0.54 acre-ft  
Side Slopes = 4:1

Elevation	Surface Area (sqft)	Incremental Volume (cft)	Cumulative Volume (acre)	Comments
779.5	1,638	922	0	Bottom of Basin
780.0	2,049	2,542	0.02	
781.0	3,034	3,700	0.08	
782.0	4,365	5,504	0.16	
783.0	6,643	7,905	0.29	
784.0	9,166	10,465	0.47	
784.5	10,465	11,236	0.58	Design High Water
785.0	11,789	12,128	0.71	Top of Bank

**Design Criteria:**

Basins are sized to accommodate the runoff under the 100 year developed condition.  
100 Year Rainfall = 5.6 inches/24 hour

Concrete Driveway (1200sqft/Lot) (c=0.92) = 1.38 acres, c=0.92\*1.10=1.01, Use 1.00  
Buildings (2500sqft/Lot) (c=0.96) = 2.87 acres, c=0.96\*1.10=1.06, Use 1.00  
Asphalt (c=0.90) = 2.35 acres, c=0.90\*1.10=0.99  
Lawns/Open Area (c=0.2) = 14.65 acres, c=0.20\*1.10=0.22  
Total Contributing Area to Basins = 21.25 acres

Modified Runoff Coefficient

$$\frac{(14.65 \text{ acres} \times 0.22) + (1.38 \text{ acres} \times 1.00) + (2.87 \text{ acres} \times 1.00) + (2.35 \text{ acres} \times 0.99)}{21.25 \text{ acres}} = 0.46$$

Use Min. Developed "C" = 0.60 for Storage Calculations

**Retention Basin #1**  
(Dry Bottom)

Retention Basin captures runoff from approximately 6.39 acres  
Runoff after development:  $6.39 \times 0.6 \times 0.467' = 1.79 \text{ Ac.}-ft.$

Runoff to be retained: Runoff after development 1.79 Ac.-ft.  
Siltation Factor 6%  
Storage required 1.90 Ac.-ft.  
Storage provided 1.98 Ac.-ft.

**Retention Basin #2**  
(Dry Bottom)

Retention Basin captures runoff from approximately 1.82 acres  
Runoff after development:  $1.82 \times 0.6 \times 0.467' = 0.51 \text{ Ac.}-ft.$

Runoff to be retained: Runoff after development 0.51 Ac.-ft.  
Siltation Factor 6%  
Storage required 0.54 Ac.-ft.  
Storage provided 0.58 Ac.-ft.

**Retention Basin #3**  
(Dry Bottom)

Retention Basin captures runoff from approximately 13.04 acres  
Runoff after development:  $13.04 \times 0.6 \times 0.467' = 3.65 \text{ Ac.}-ft.$

Runoff to be retained: Runoff after development 3.65 Ac.-ft.  
Siltation Factor 6%  
Storage required 3.87 Ac.-ft.  
Storage provided 3.90 Ac.-ft.

**STRUCTURE DATA TABLE**

STORM SEWER SIZED FOR A 10 YEAR, 2 HOUR STORM EVENT

Number	Downstream	Structure		Total Area (Ac.)	Cumulative C	Cumulative CA	Intensity (in/hr)	Q Req'd (cfs)	Length (feet)	Pipe Dia. (inches)	Slope (ft/100 ft)	Q Prov'd (cfs)	Velocity (ft/sec)	Upper I.E.	Lower I.E.	Rim Up	Rim Down	Cover Up	Cover Down	Structure Type	Casting	Outlet Str				
		Rim Area (sqft)	Area (Ac.)																							
10	11	803.00	23,473	0.54	0.60	0.32	0.54	0.59	0.32	1.2	0.4	28	12	0.50	2.5	3.2	798.350	798.210	803.00	803.00	3.42	3.56	Std. 30" Dia. Inlet	R-3501-L1A	STR 11	
11	13	803.00	5,998	0.14	0.60	0.08	0.94	0.59	0.55	1.2	0.7	146	12	0.50	2.5	3.2	798.210	797.480	803.00	803.00	3.56	4.59	Std. 48" Dia. Manhole	R-3501-L1A	STR 13	
12	11		11,236	0.26	0.60	0.15	0.26	0.58	0.15	1.2	0.2	22	12	3.10	6.3	8.0	799.880	799.213		803.00		2.56	End Section, 12"		STR 11	
13	Existing	803.30			0.00	0.94	0.59	0.55	1.2	0.7	395	12	0.80	3.2	4.1	797.480	794.320	803.30		4.59			Std. 48" Dia. Manhole	R-1642	Existing	
14	15		38,731	0.89	0.60	0.53	0.89	0.60	0.53	1.2	0.6	105	12	0.50	2.5	3.2	793.005	792.481		796.80		3.09	3.09	Std. 48" Dia. Manhole	R-3286-BV	STR 15
15	16	796.80	24,069	0.55	0.60	0.33	1.44	0.60	0.86	1.2	1.0	39	12	1.00	3.6	4.5	792.481	792.090	796.80	797.10	3.09	3.78	Std. 48" Dia. Manhole	R-3286-BV	STR 16	
16	17	797.10	21,346	0.49	0.60	0.29	1.93	0.60	1.15	1.2	1.4	320	12	1.00	3.6	4.5	792.090	788.887	797.10	794.59	3.78	4.48	Std. 48" Dia. Manhole	R-3501-L1A	STR 17	
17	18	794.59	43,785	1.01	0.60	0.60	2.94	0.60	1.75	1.2	2.1	28	12	1.10	3.7	4.8	788.887	788.579	794.59	794.59	4.48	4.79	Std. 48" Dia. Manhole	R-3286-BV	STR 18	
18	22	794.59	9,633	0.22	0.60	0.13	3.16	0.59	1.88	1.2	2.3	335	12	1.10	3.7	4.8	788.579	784.892	794.59	790.16	4.79	4.04	Std. 48" Dia. Manhole	R-3286-BV	STR 20	
19	20	793.50							1.2	0.0	100	12	2.00	5.1	6.4	788.141	786.136	793.50	790.40	4.13	3.04	Std. 30" Dia. Inlet	R-2560-C	STR 22		
20	21	790.40							1.2	0.0	34	12	2.00	5.1	6.4	786.136	785.452	790.40	790.16	3.04	3.48	Std. 48" Dia. Manhole	R-1642	STR 21		
21	22	790.16	48,757	1.12	0.60	0.67	1.12	0.60	0.67	1.2	0.8	28	12	2.00	5.1	6.4	785.452	784.892	790.16	790.16	3.48	4.04	Std. 48" Dia. Manhole	R-3286-BV	STR 22	
22	23	790.16	22,137	0.51	0.60	0.30	4.79	0.59	2.85	1.2	3.4	138	15	0.50	4.6	3.7	784.892	784.000	790.16	0.00	3.97		Std. 48" Dia. Manhole	R-3286-BV	STR 23	
23	Basin #3					0.00	4.79	0.59	2.85	1.2	3.4		12			784.000						End Section, 12"		Basin #3		
24	25	788.23	58,877	1.35	0.60	0.81	1.35	0.60	0.81	1.2	1.0	28	12	1.00	3.6	4.5	783.414	783.134	788.23	788.23	3.59	3.87	Std. 30" Dia. Inlet	R-3287-15	STR 25	
25	26	788.23	34,205	0.79	0.60	0.47	2.14	0.60	1.28	1.2	1.5	45	12	2.50	5.6	7.2	783.134	782.000	788.23	0.00	3.87		Std. 48" Dia. Manhole	R-3287-15	STR 26	
26	Basin #3					0.00	2.14	0.60	1.28	1.2	1.5		12			782.000						End Section, 12"		Basin #3		
27	28	790.40	29,099	0.67	0.60	0.40	0.67	0.60	0.40	1.2	0.5	132	12	2.50	5.6	7.2	785.196	781.900	790.40		3.98		Std. 30" Dia. Inlet	R-3501-L1A	STR 28	
28	Basin #2					0.00	0.67	0.60	0.40	1.2	0.5		12			781.900						End Section, 12"		Basin #2		

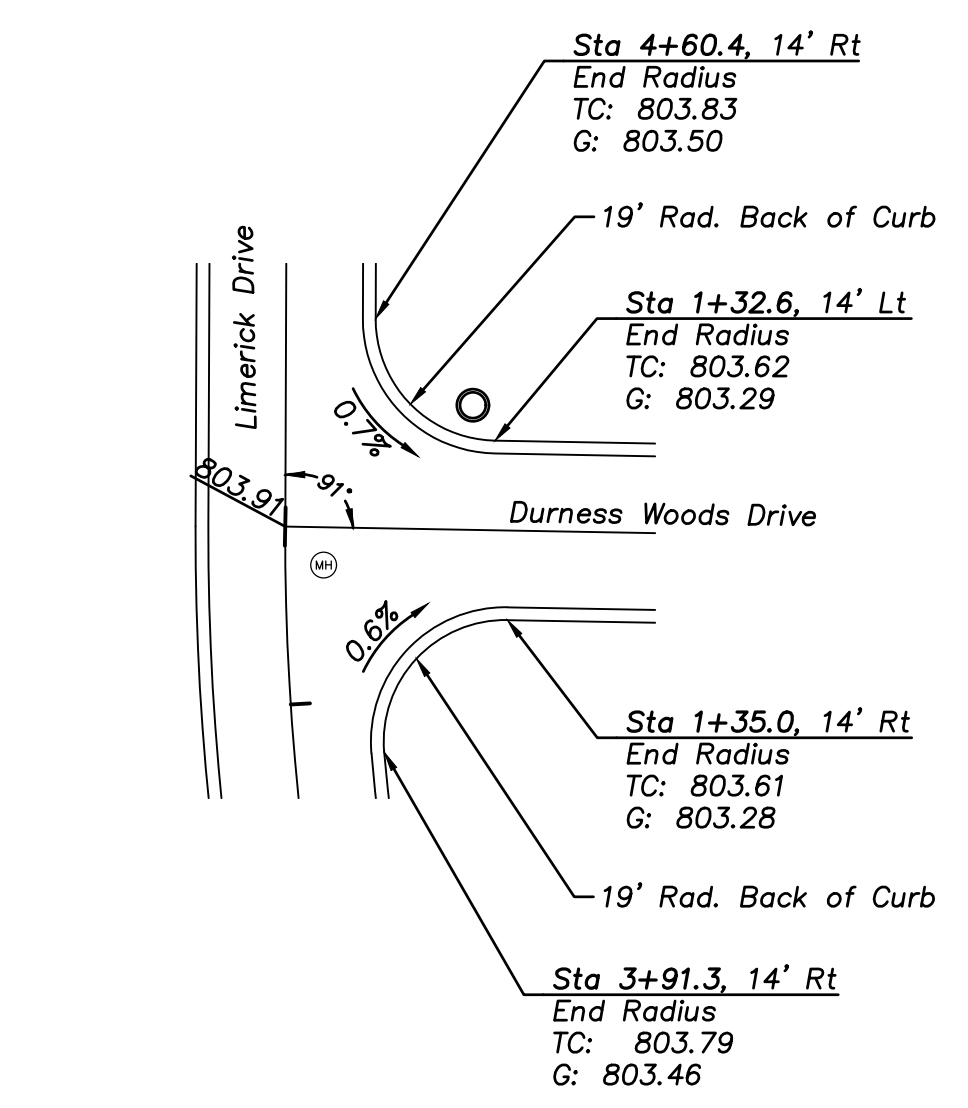
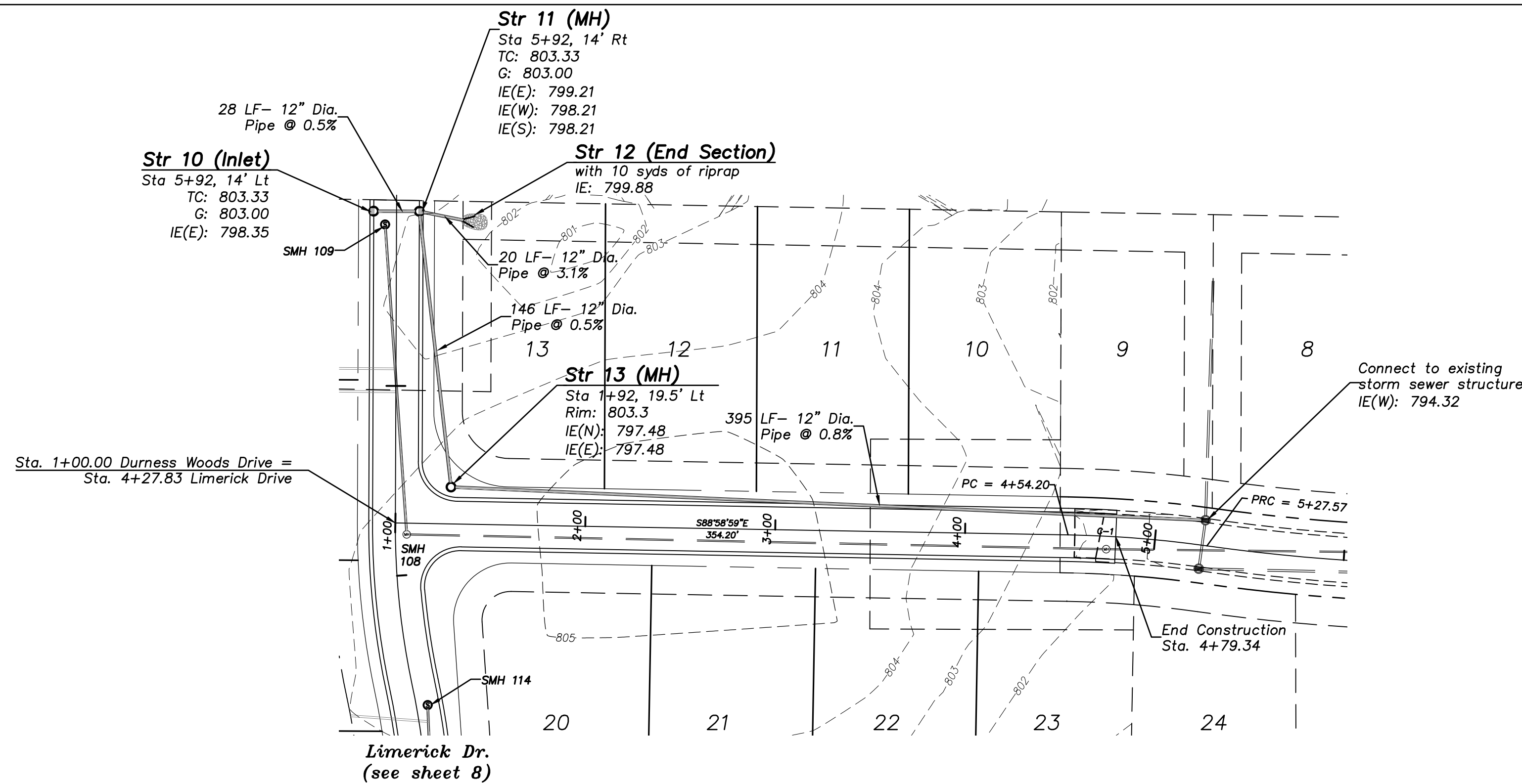
**Notes:**

- A Soil Erosion Control Plan has been developed for this project to minimize sediment entering the retention areas.
- 10 syds (min.) of rip-rap/stone shall be around end sections to minimize erosion.
- Storm sewer shall be reinforced concrete pipe (RCP) class III min. and meet St. Joseph County Standards.
- Local streets shall be 28' wide from back of curb to back of curb with a 24' wide bituminous roadway and 2' curb and gutter.
- Collector streets shall be 38' wide from back of curb to back of curb with a 34' wide bituminous roadway and 2' curb and gutter.
- All drainage easements containing structures are 30' in width.
- Lot A catchment area is excluded for this phase. Final drainage for Lot A will be addressed when it is developed.

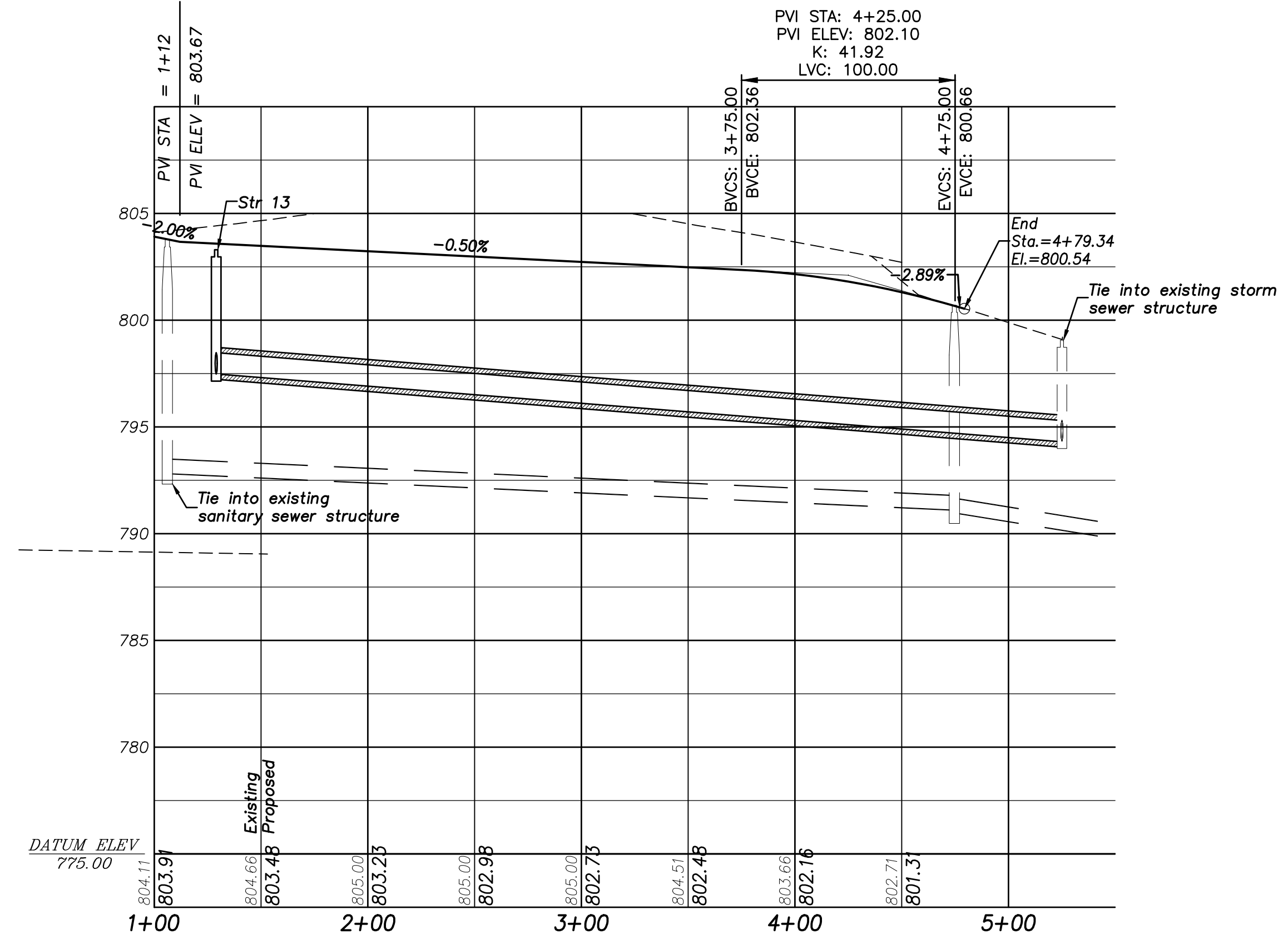
**ABONMARCHÉ**  
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**INVERNESS WOODS PHASE TWO**

PROJECT: INVERNESS WOODS PHASE TWO  
SHEET TITLE: FINAL DRAINAGE PLAN  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SEAL:   
SIGNATURE:   
DATE: 06-29-2021  
SCALE: HORZ: 1"=100'  
VERT:  
ACI JOB #: 21-0242  
SHEET NO. 5 of 17



**Intersection Detail**  
Durness Woods Drive & Limerick Drive  
Scale: 1"=30'

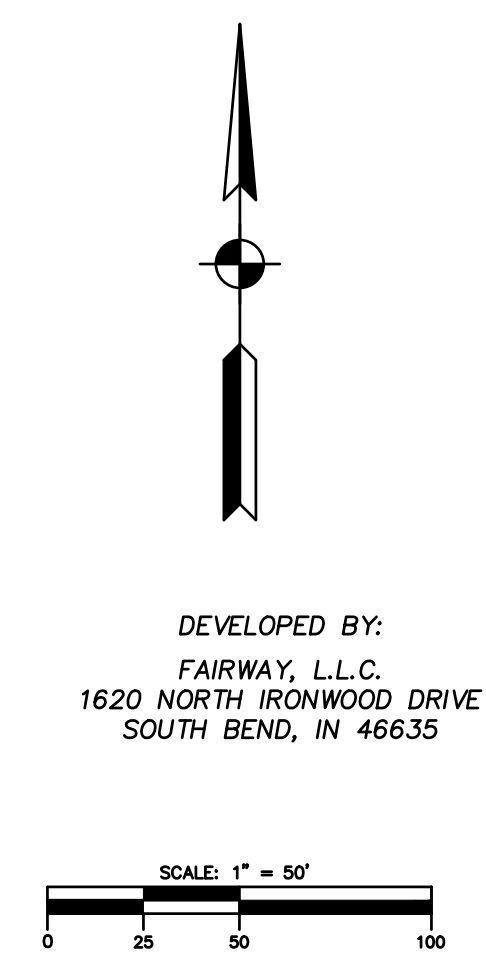


Curve Table						
Curve	Radius	Length	Chord	Bearing	Tangent	Delta
C-1	600.00'	73.37'	73.33'	N85°28'47"W	36.73'	7°00'24"

Storm Structure & Casting Information (for this sheet)		
Str. No.	Str. Dia.	Casting & Grating
10	30"	R-3501-L1A
11	48"	R-3501-L1A
12	-	End Section
13	48"	R-1642

All Casting Numbers Reference Neenah Castings.  
Approved Equivalent Castings May Be Used.

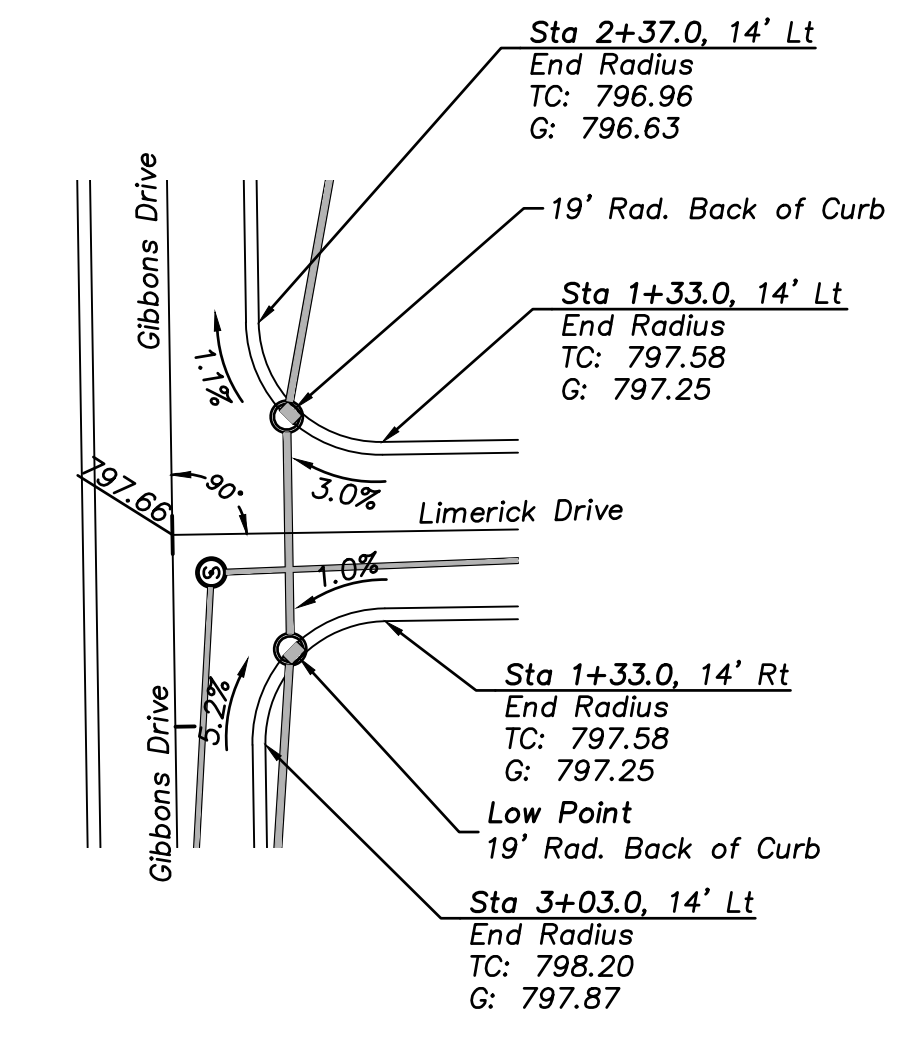
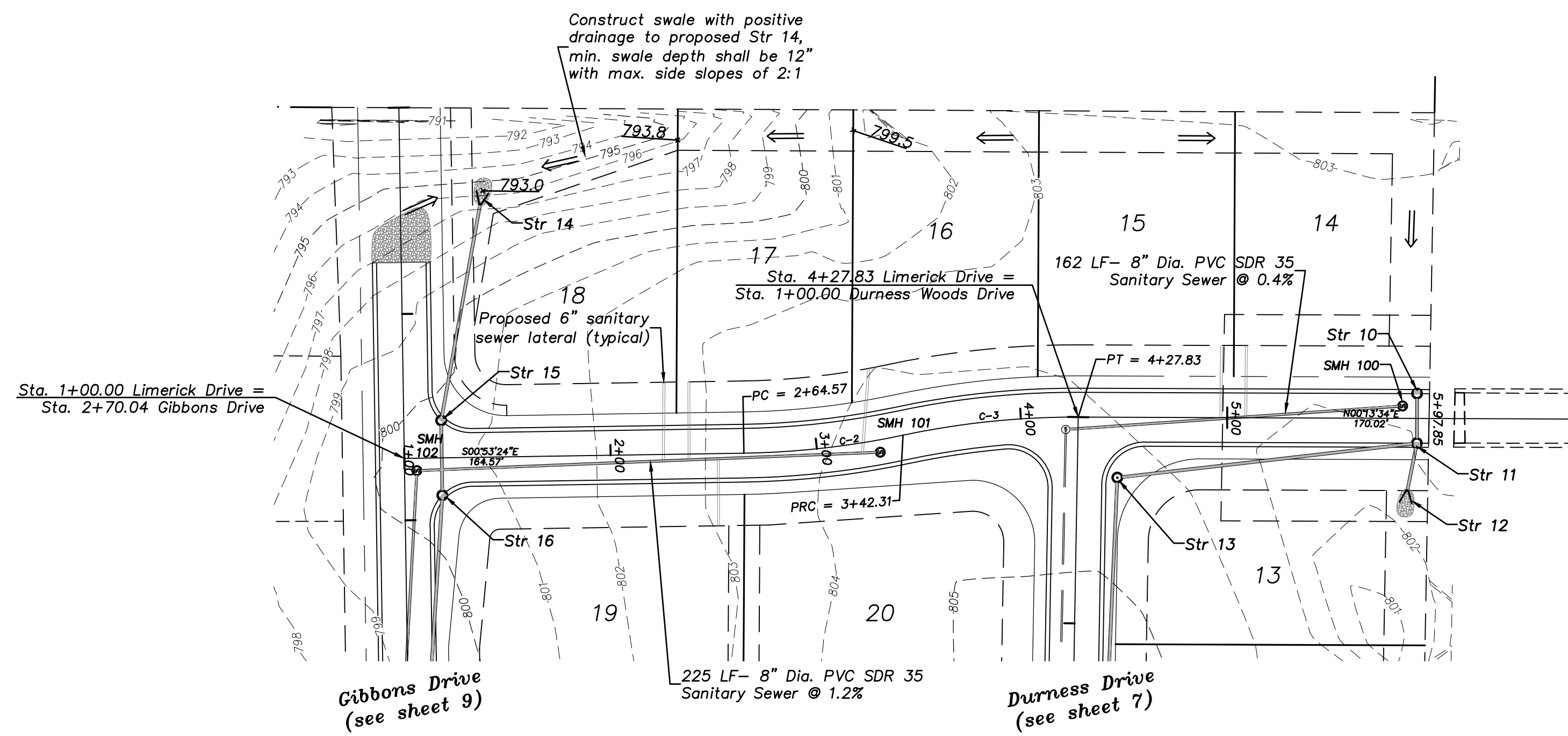
Sanitary sewer laterals shall be installed at 8-10 ft. below grade at the Easement line.  
Sanitary sewer main shall be PVC SDR 26 when greater than 16 ft. deep.



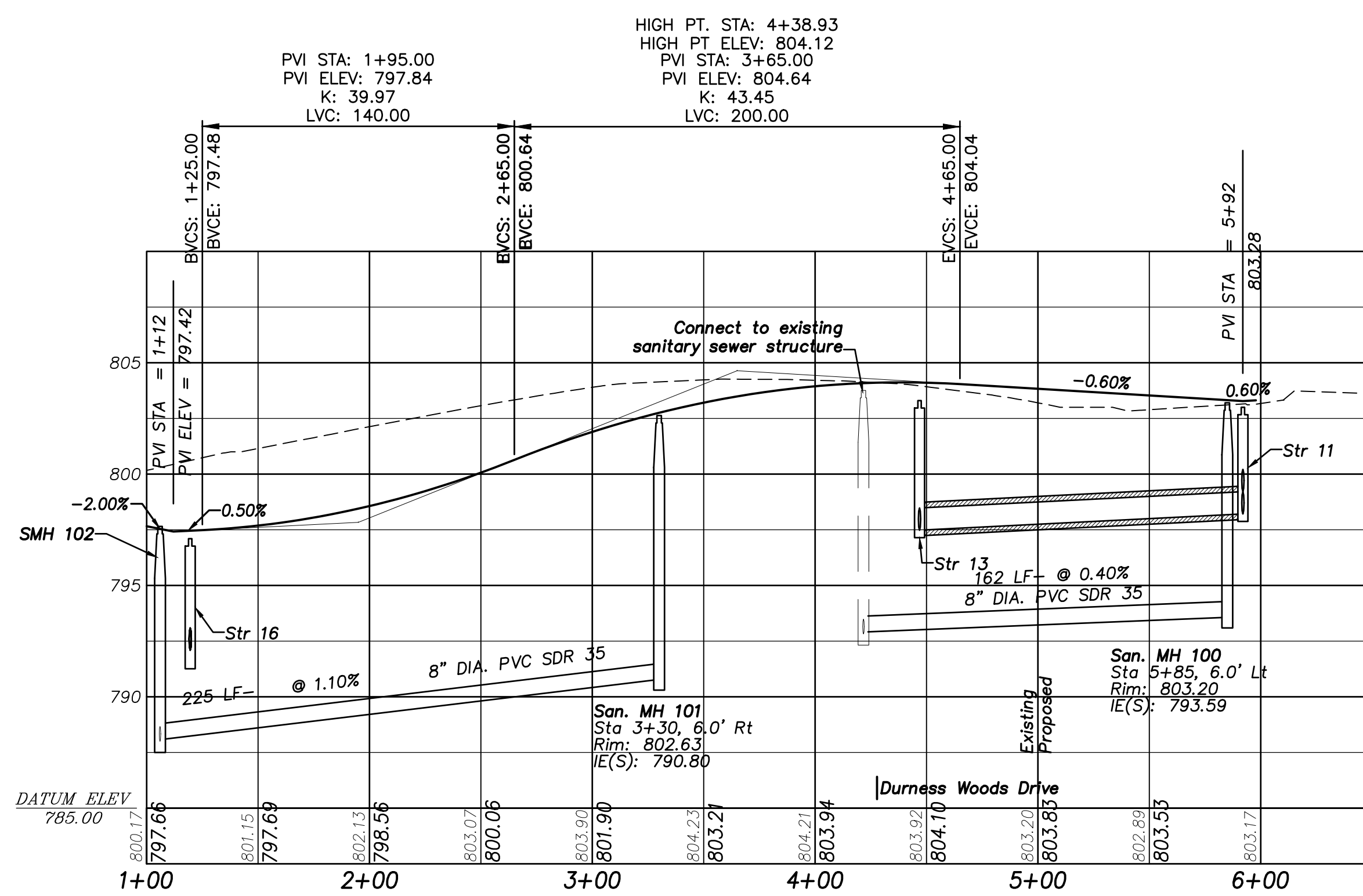
**INVERNESS WOODS  
PHASE TWO**

**DURNESS WOODS DRIVE  
PLAN AND PROFILE  
STA 1+00 TO 4+79**

SHEET TITLE:  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SEAL:  
SIGNATURE: *[Signature]*  
DATE: 06-29-2021  
SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'  
ACI JOB #  
**21-0242**  
SHEET NO.

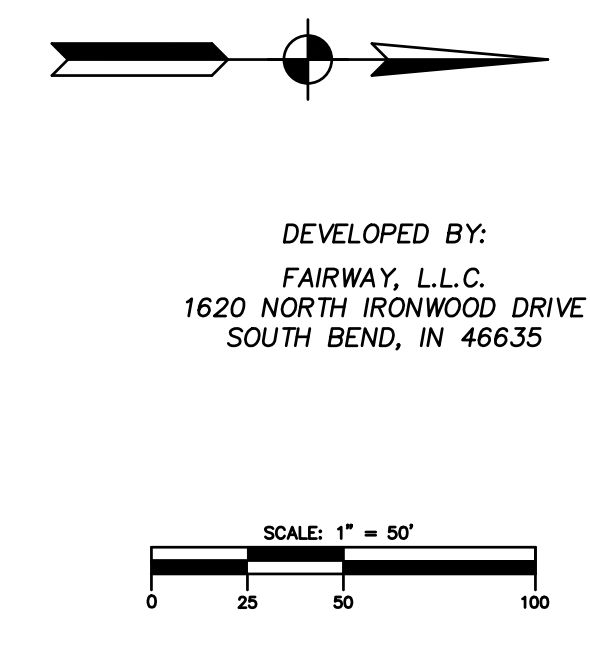


**Intersection Detail**  
Limerick Drive & Gibbons Drive  
Scale: 1"=30'



Curve Table						
Curve	Radius	Length	Chord	Bearing	Tangent	Delta
C-2	400.00'	77.73'	77.61'	N06°27'26"W	38.99'	11°08'04"
C-3	400.00'	85.53'	85.36'	S05°53'57"E	42.93'	12°15'02"

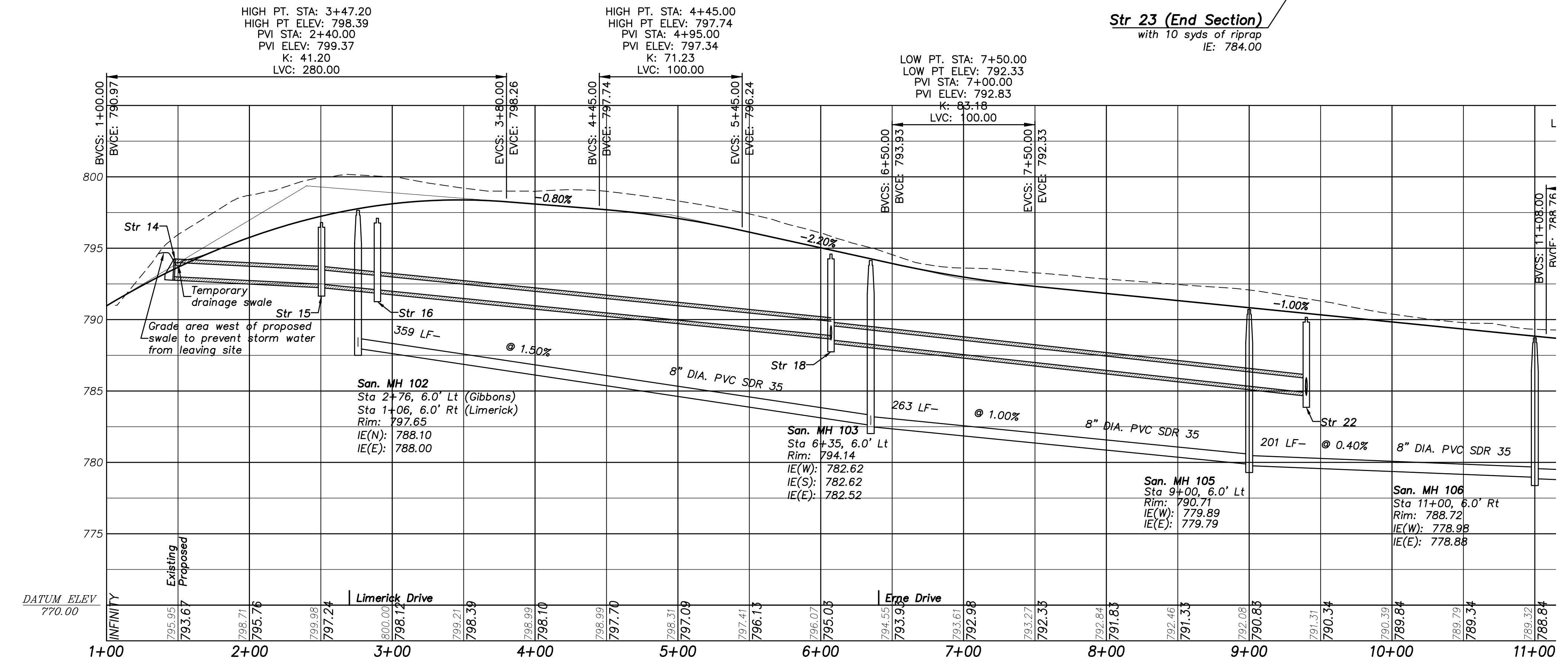
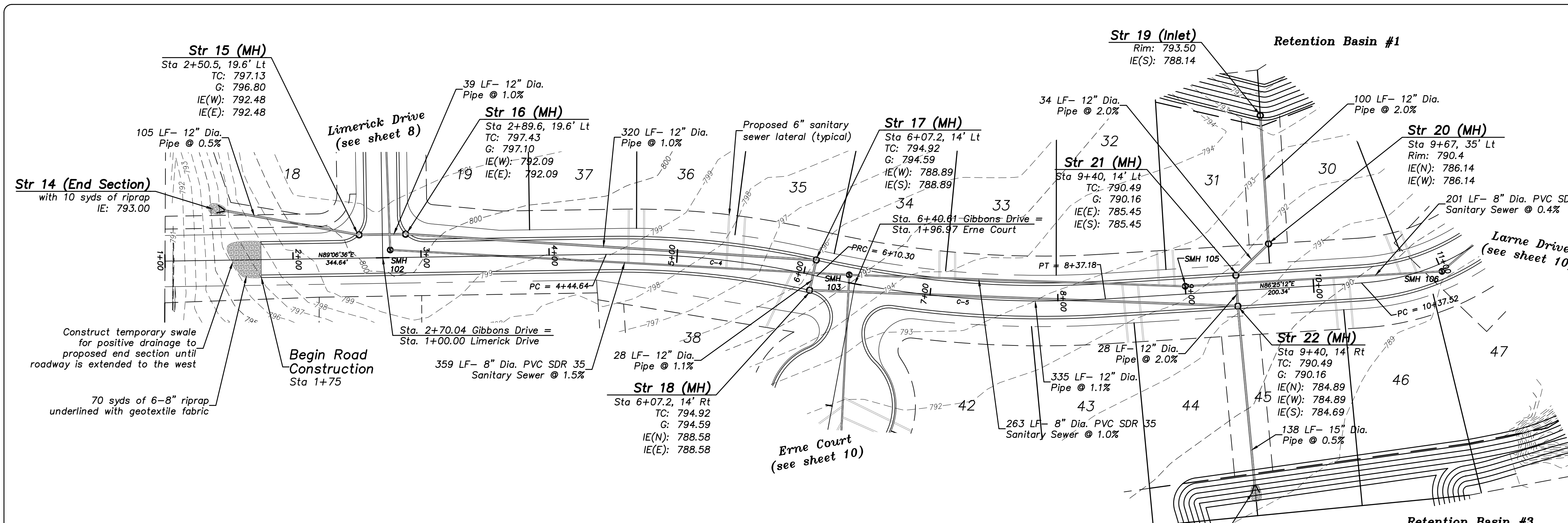
Sanitary sewer laterals shall be installed at 8-10 ft. below grade at the Easement line.  
Sanitary sewer main shall be PVC SDR 26 when greater than 16 ft. deep.



**INVERNESS WOODS  
PHASE TWO**

**LIMERICK DRIVE  
PLAN AND PROFILE  
STA 1+00 TO 5+98**

PROJECT: INVERNESS WOODS PHASE TWO  
SHEET TITLE: LIMERICK DRIVE PLAN AND PROFILE STA 1+00 TO 5+98  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SEAL:   
SIGNATURE:   
DATE: 06-29-2021  
SCALE: HORZ: 1"=50' VERT: 1"=5'  
ACI JOB #: 21-0242  
SHEET NO. 7 of 17



**Curve Table**

Curve	Radius	Length	Chord	Bearing	Tangent	Delta
C-4	700.00'	165.66'	165.27'	N84°06'37"W	83.22'	13°33'33"
C-5	800.00'	226.88'	226.12'	S85°27'19"E	114.21'	16°14'57"
C-6	180.00'	268.30'	244.14'	N43°43'06"E	166.11'	85°24'11"

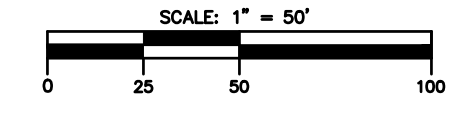
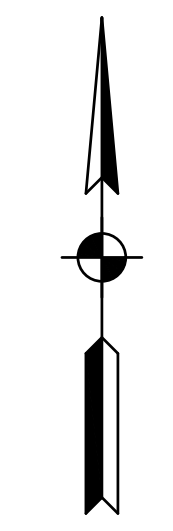
**Storm Structure & Casting Information (for this sheet)**

Str. No.	Str. Dia.	Casting & Grating
14	-	End Section
15	48"	R-3286-BV
16	48"	R-3501-L1A
17	48"	R-3286-BV
18	48"	R-3286-BV
19	30"	R-2560-C
20	48"	R-1642
21	48"	R-3286-BV
22	48"	R-3286-BV
23	-	End Section

All Casting Numbers Reference Neenah Castings. Approved Equivalent Castings May Be Used.

Sanitary sewer laterals shall be installed at 8-10 ft. below grade at the Easement line.

Sanitary sewer main shall be PVC SDR 26 when greater than 16 ft. deep.

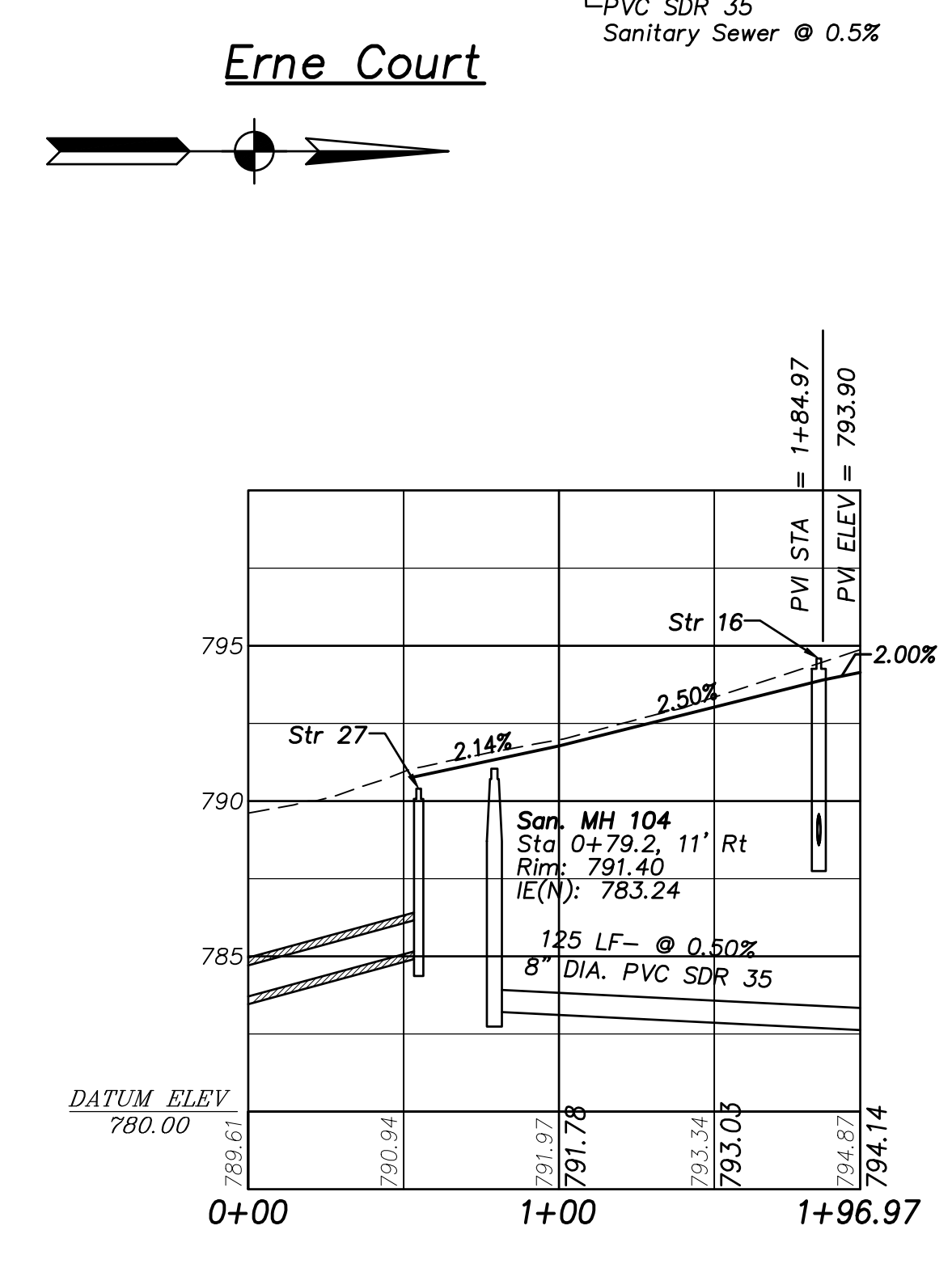
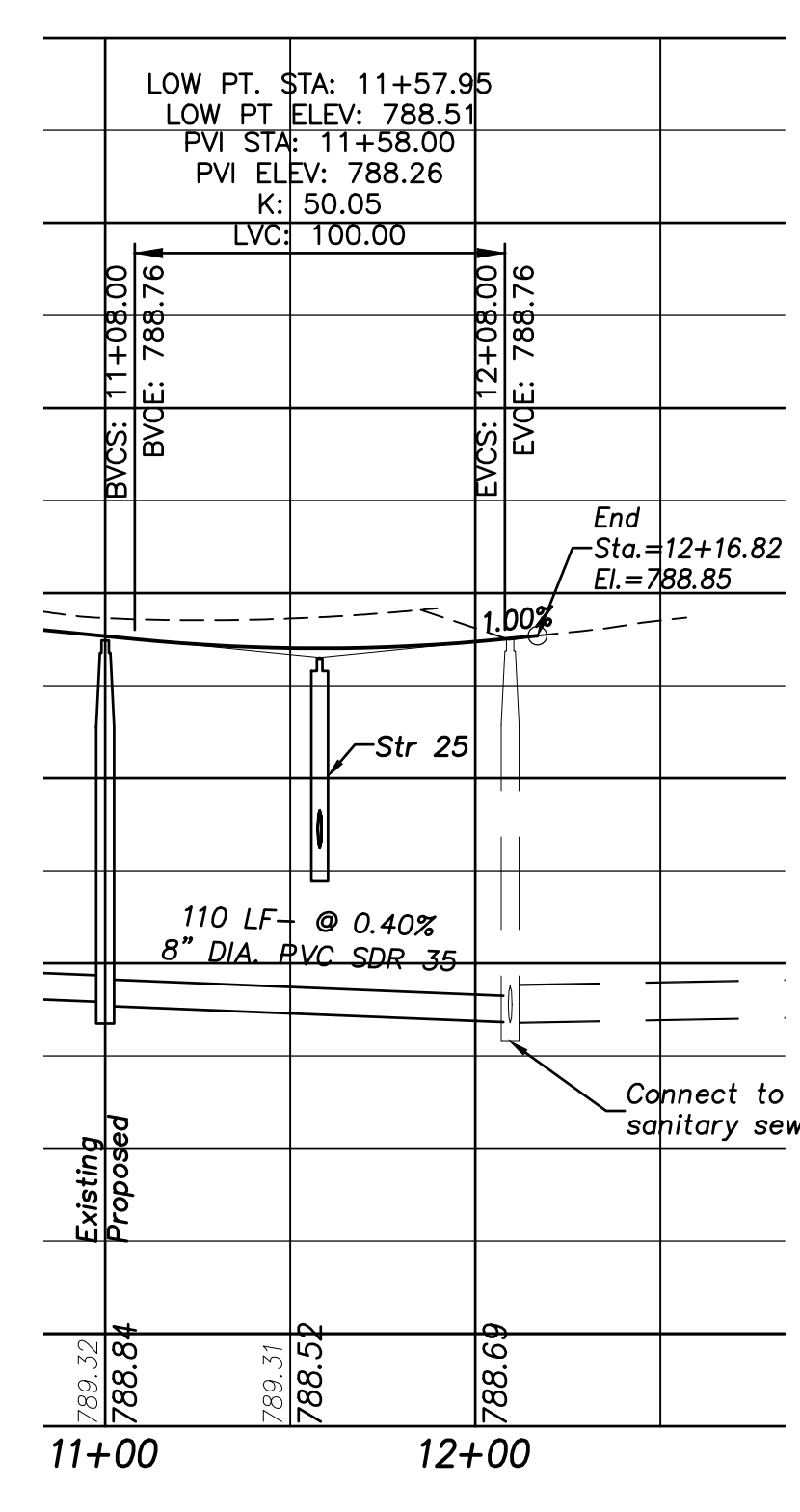
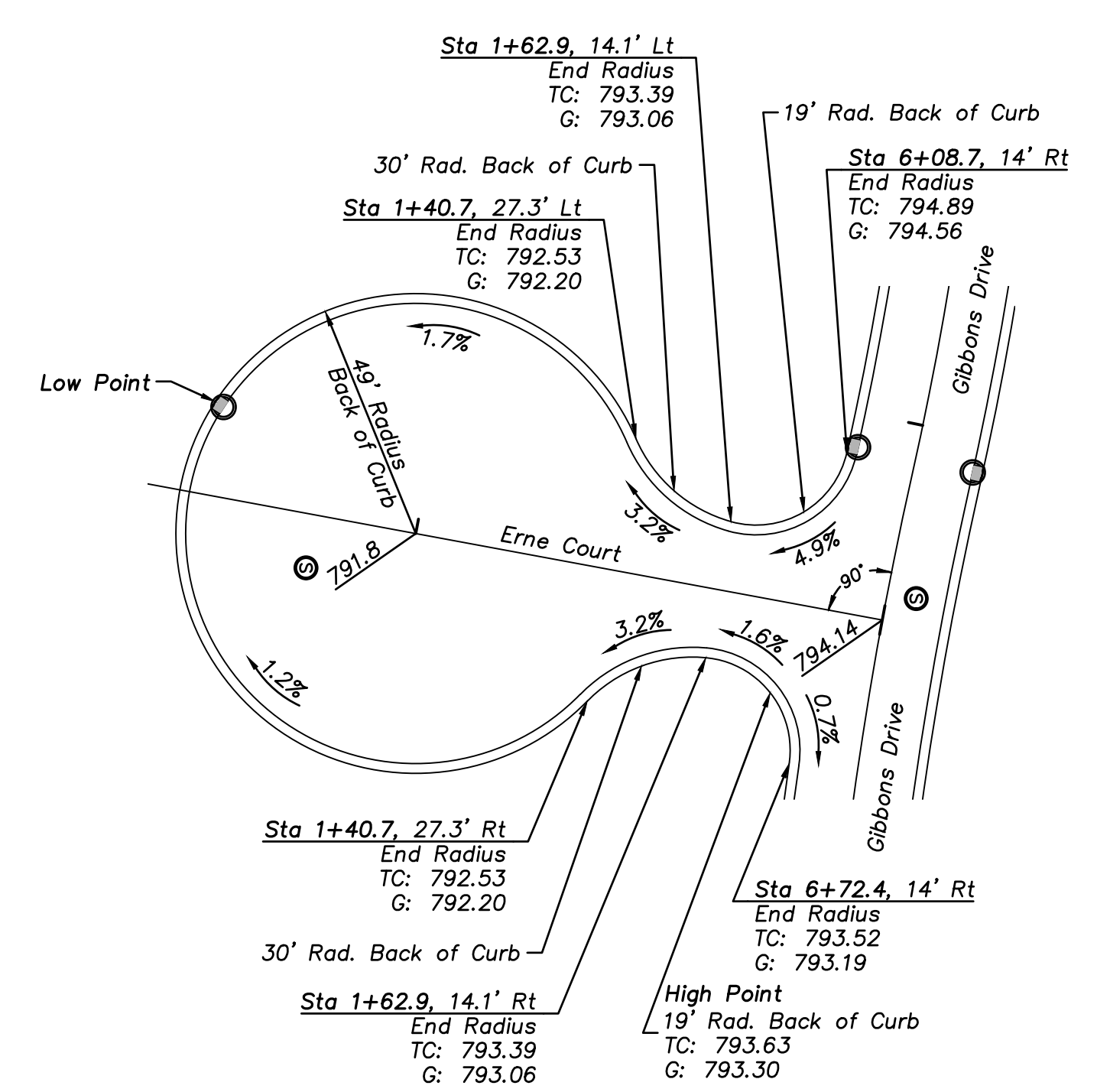
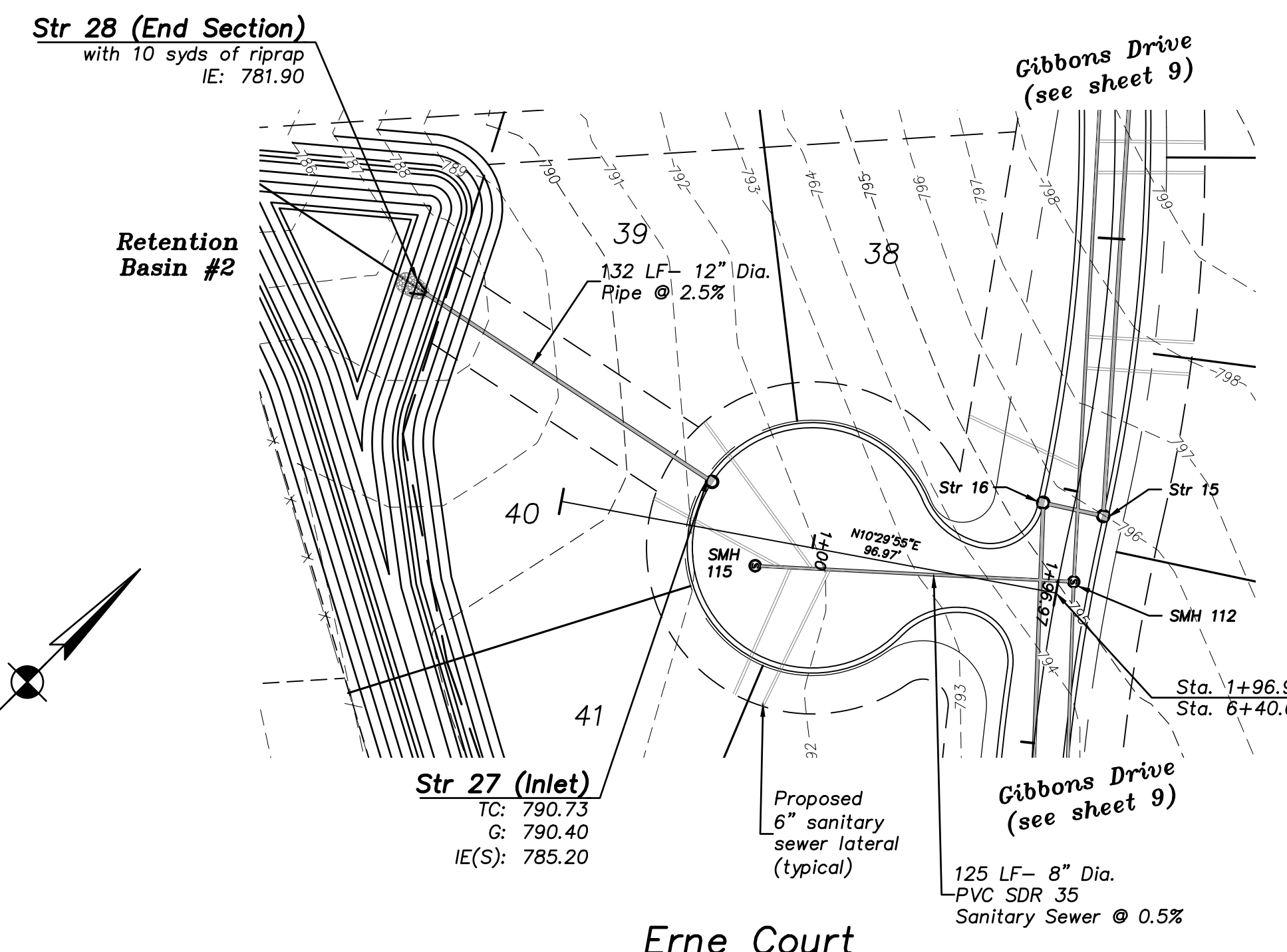
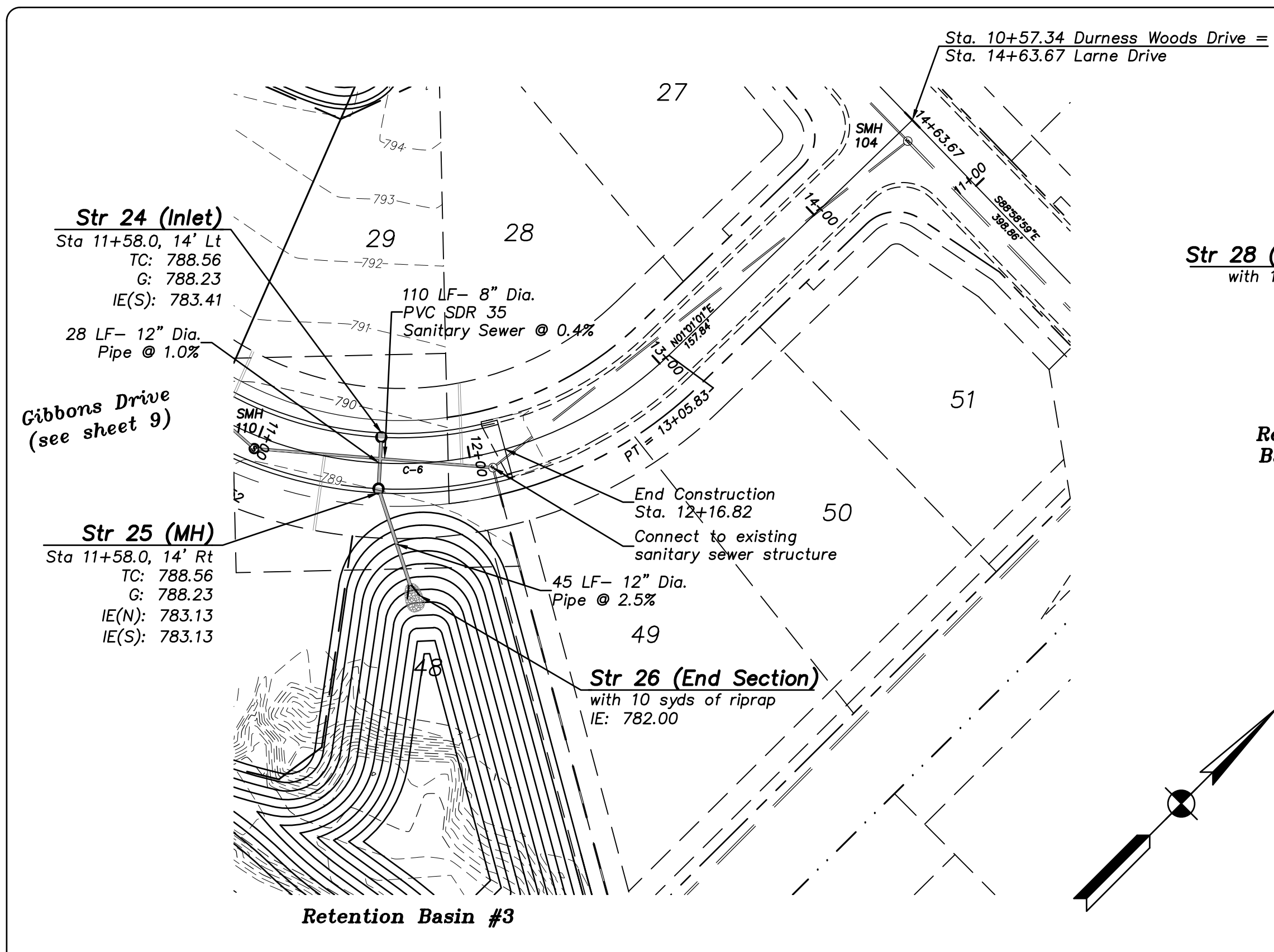


DEVELOPED BY:  
FAIRWAY, L.L.C.  
1620 NORTH IRONWOOD DRIVE  
SOUTH BEND, IN 46635

**INVERNESS WOODS  
PHASE TWO**

**GIBBONS DRIVE  
PLAN AND PROFILE  
STA 1+00 TO 11+00**

SHEET TITLE:  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SEAL:  
REGISTERED PROFESSIONAL ENGINEER  
NO. 19400322  
STATE OF INDIANA  
SIGNATURE:  
DATE: 06-29-2021  
SCALE:  
HORIZ: 1"=50'  
VERT: 1"=5'  
ACI JOB #  
21-0242  
SHEET NO.

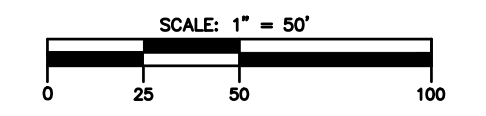


Curve Table						
Curve	Radius	Length	Chord	Bearing	Tangent	Delta
C-6	180.00'	268.30'	244.14'	N43°43'06\"E	166.11'	85°24'11\"

Storm Structure & Casting Information (for this sheet)		
Str. No.	Str. Dia.	Casting & Grating
24	30"	R-3501-L1A
25	48"	R-3501-L1A
26	-	End Section
27	30"	R-3501-L1A
28	-	End Section

Sanitary sewer laterals shall be installed at 8-10 ft. below grade at the Easement line.  
Sanitary sewer main shall be PVC SDR 26 when greater than 16 ft. deep.

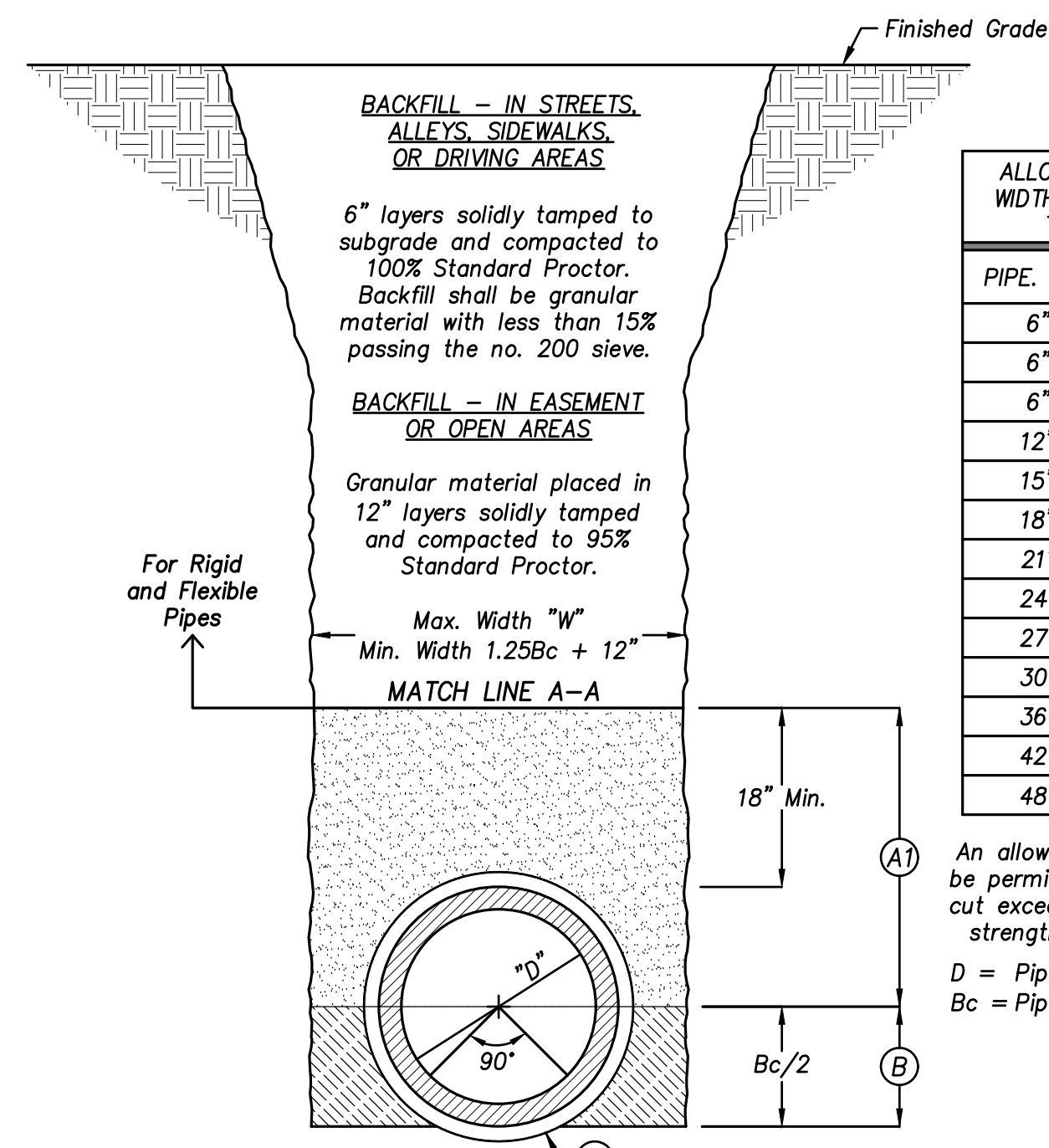
DEVELOPED BY:  
FAIRWAY, L.L.C.  
1620 NORTH IRONWOOD DRIVE  
SOUTH BEND, IN 46635



- (A1) Hand placed backfill and mechanically tamped in 6" layers using suitable on-site granular material or "B" Borrow.
- (A2) Crushed stone or gravel, INDOT No. 8, 9, or 73 with a 50% mechanical crush count conforming to ASTM D-2321 Class I or II material, installed in 4" balanced lifts and mechanically tamped.
- (B) Hand placed backfill and mechanically tamped in 4" layers using suitable granular material or "B" Borrow.
- (C) Pipe shall be bedded firmly on undisturbed ground, excavate for bells, no weight shall be supported by the bells.
- (D) Pipe shall be bedded on a minimum 4" of Class I, II, or III material per ASTM D-2321.

**NOTES:**

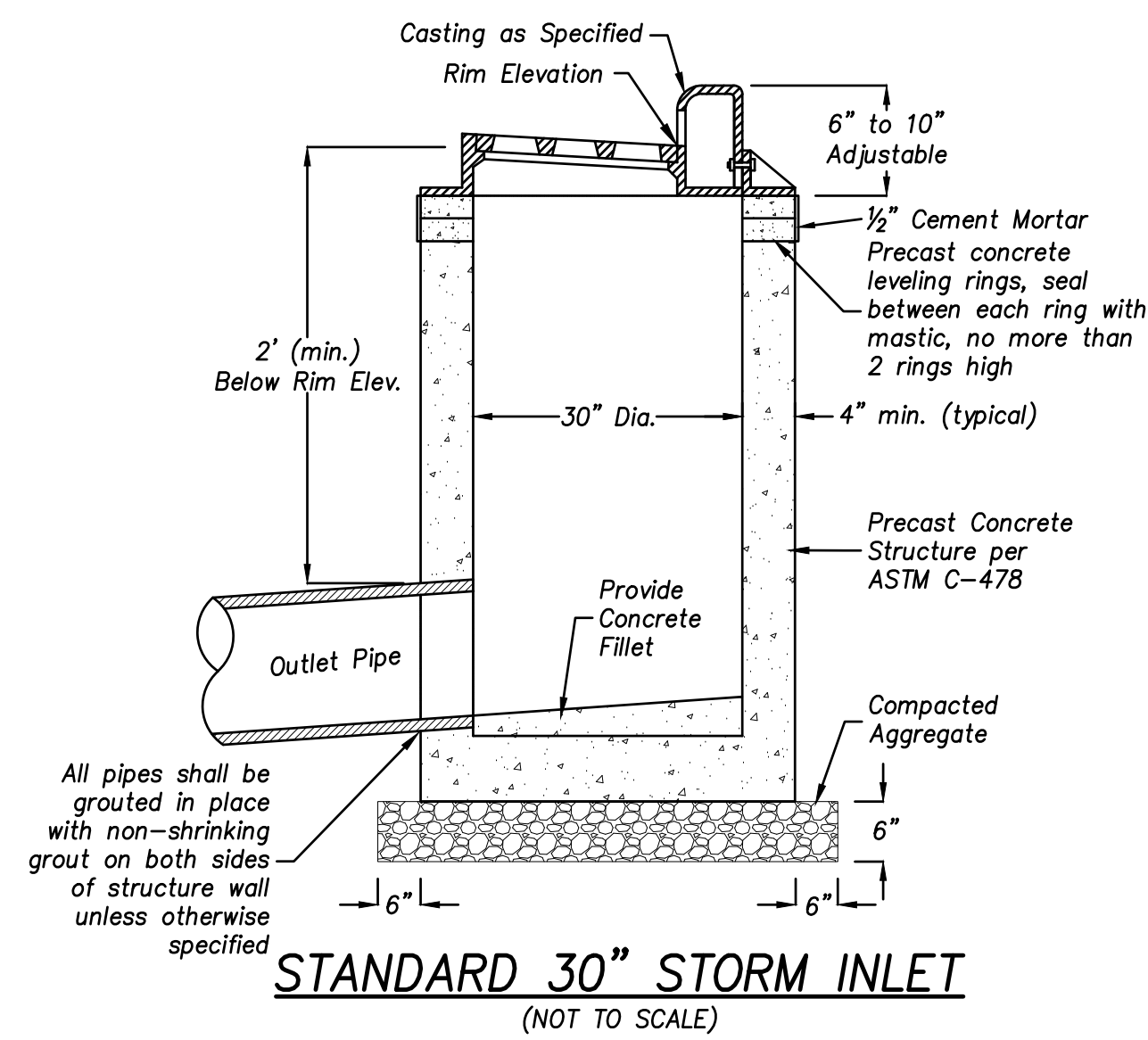
1. Backfill material shall be free from debris, organic material, stones, frozen material, etc.
2. All pipe bedding material shall be hand placed around the haunch and sides of the pipe to ensure proper compaction and complete filling of all voids.
3. Grain size distribution or material certification specifying that material meets "B" Borrow requirements shall be submitted to St. Joseph County Prior to the placement of any material.



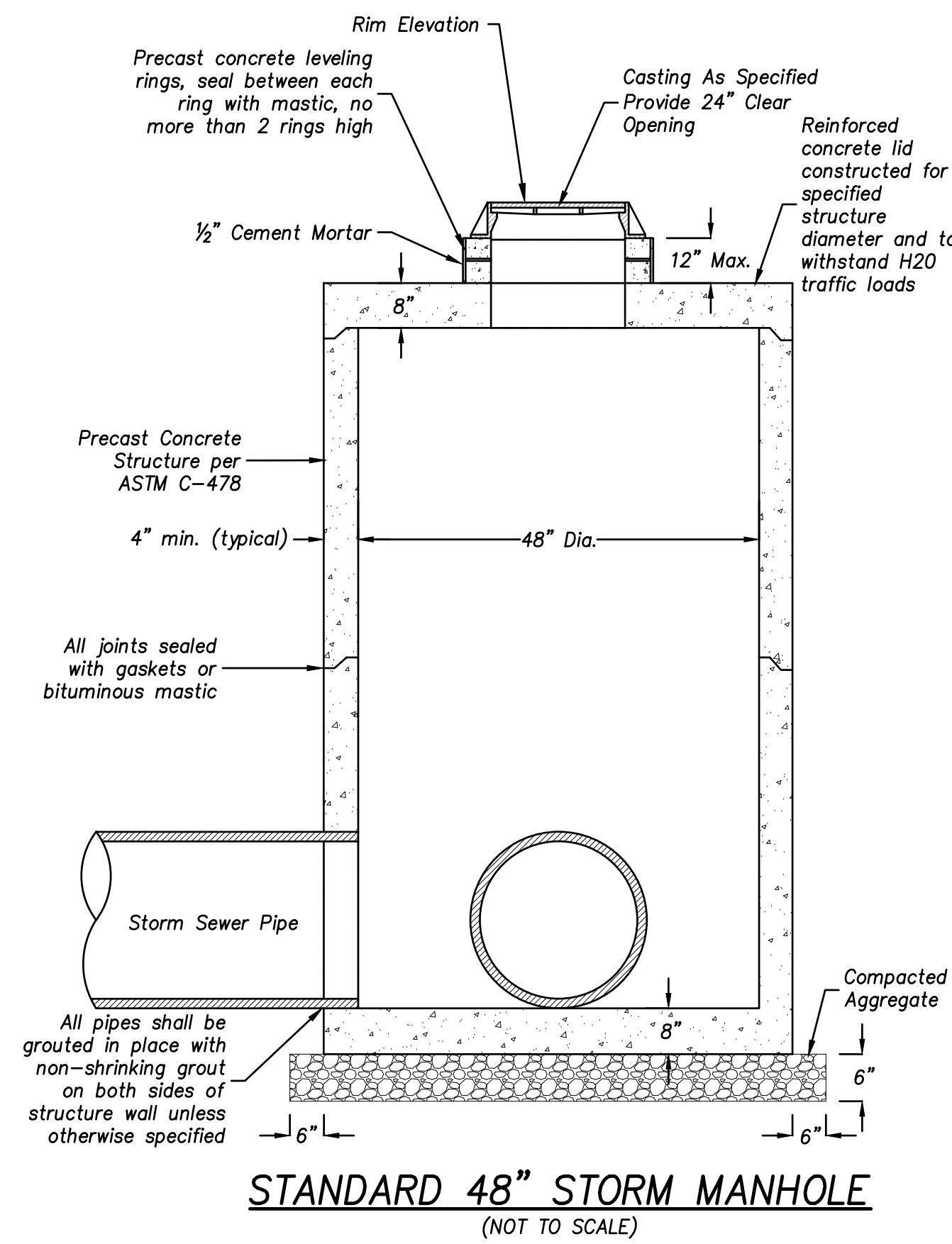
PIPE DIA.	"W"
6"	18"
6"	24"
6"	24"
12"	30"
15"	35"
18"	39"
21"	42"
24"	45"
27"	48"
30"	53"
36"	68"
42"	75"
48"	82"

An allowable "W" of 30" will be permitted where depth of cut exceeds 12 ft. and extra strength pipe is specified.  
 D = Pipe diameter (internal)  
 Bc = Pipe diameter (external)

**RIGID PIPE BEDDING DETAIL**  
 (RCP & DI)  
 (NOT TO SCALE)



**STANDARD 30" STORM INLET**  
 (NOT TO SCALE)



**STANDARD 48" STORM MANHOLE**  
 (NOT TO SCALE)

PROJECT:

SHEET TITLE:

DRAWN BY: **ZDH**  
 DESIGNED BY: **ZDH**  
 PM REVIEW: **RAN**  
 QA/QC REVIEW:

DATE: **06-29-2021**

SEAL:

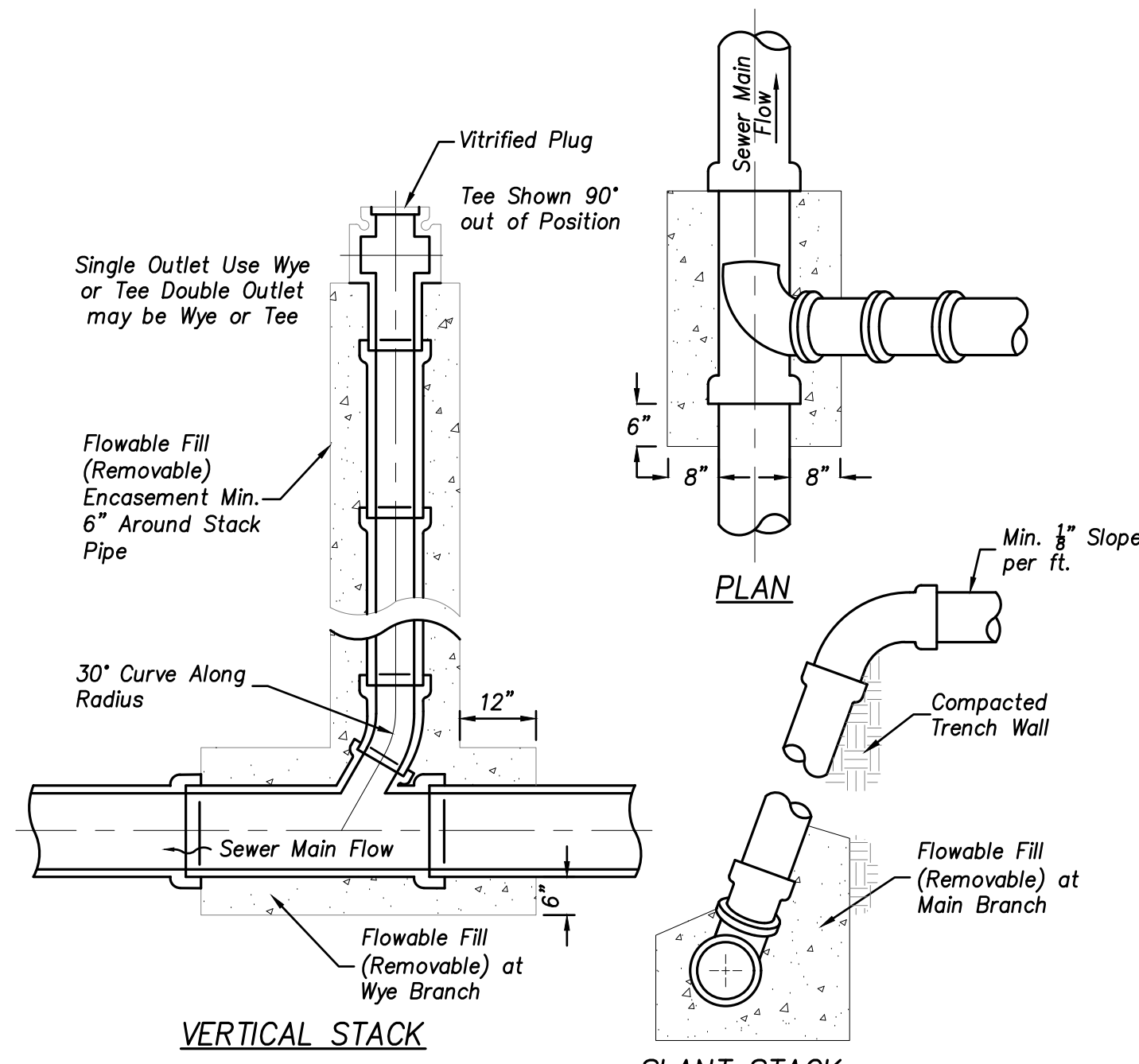
SIGNATURE:

DATE: **06-29-2021**

SCALE:  
 HORIZ:  
 VERT:

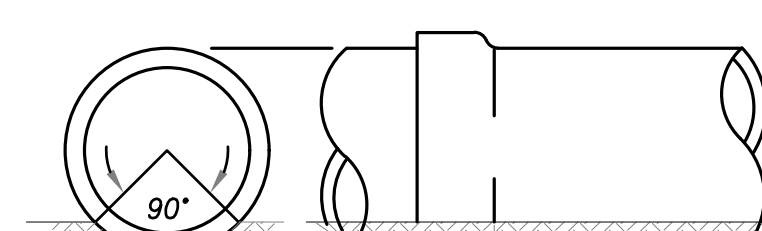
ACI JOB # **21-0242**

SHEET NO. **10 of 17**



- NOTES:**
1. Refer to INDOT Standard Specification Section 213 for removable flowable fill requirements.
  2. Wye replacement: Remove old wye, trim existing as pipe required, install new wye and pipe and connect to existing pipes with Fernco couplings.

**VERTICAL AND SLANT STACKS**  
(NOT TO SCALE)

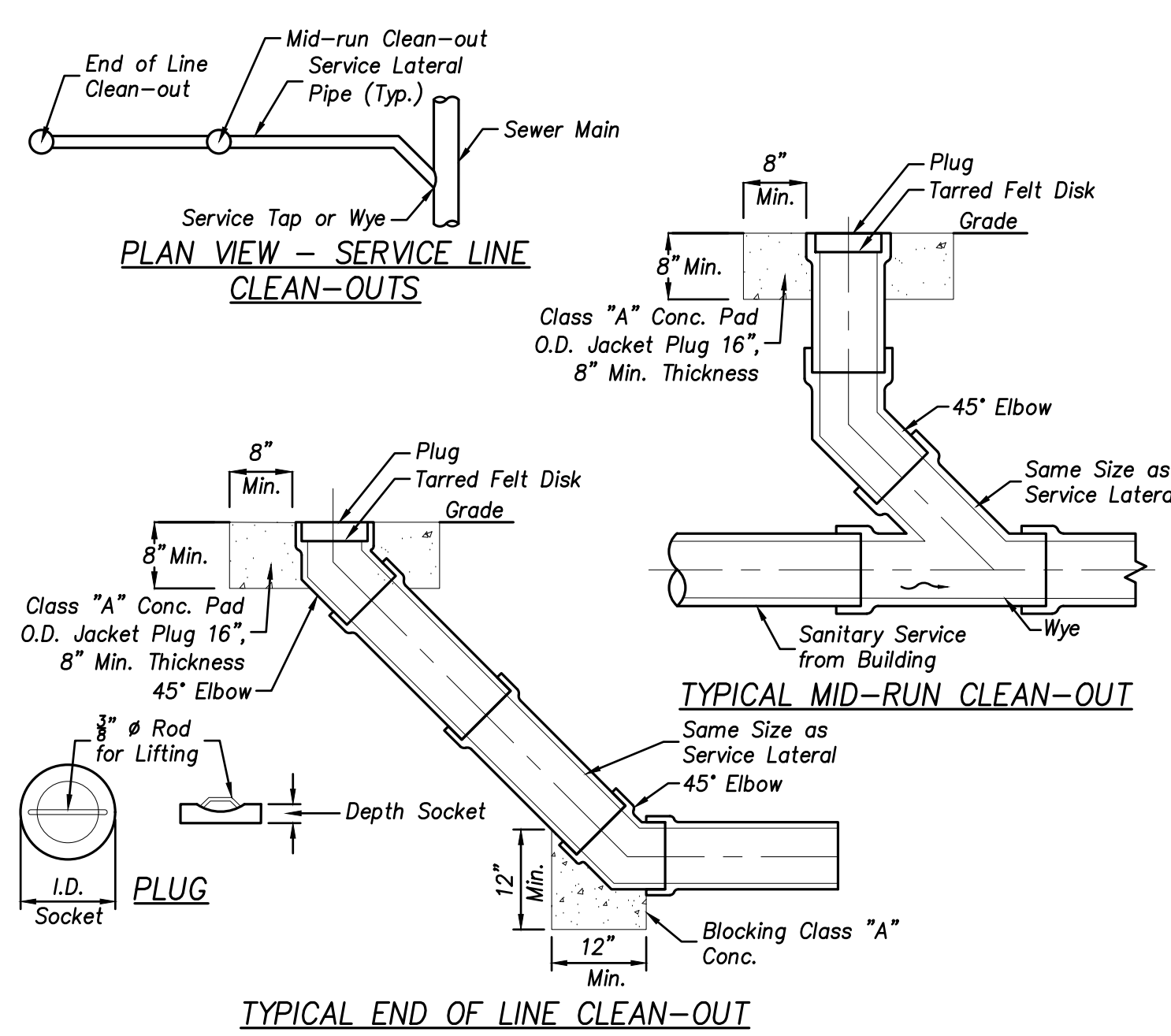


The Lower 90° Arc of the Barrel of the Pipe Should be in Firm Contact With Undisturbed Earth. The Bedding Shall be Continuous and Uniform for the Length of the Pipe.

Small Excavations Should be Made for the Bells. No Weight Shall be Supported by the Bells. These Should be no Larger Than Necessary to Clear the Bell.

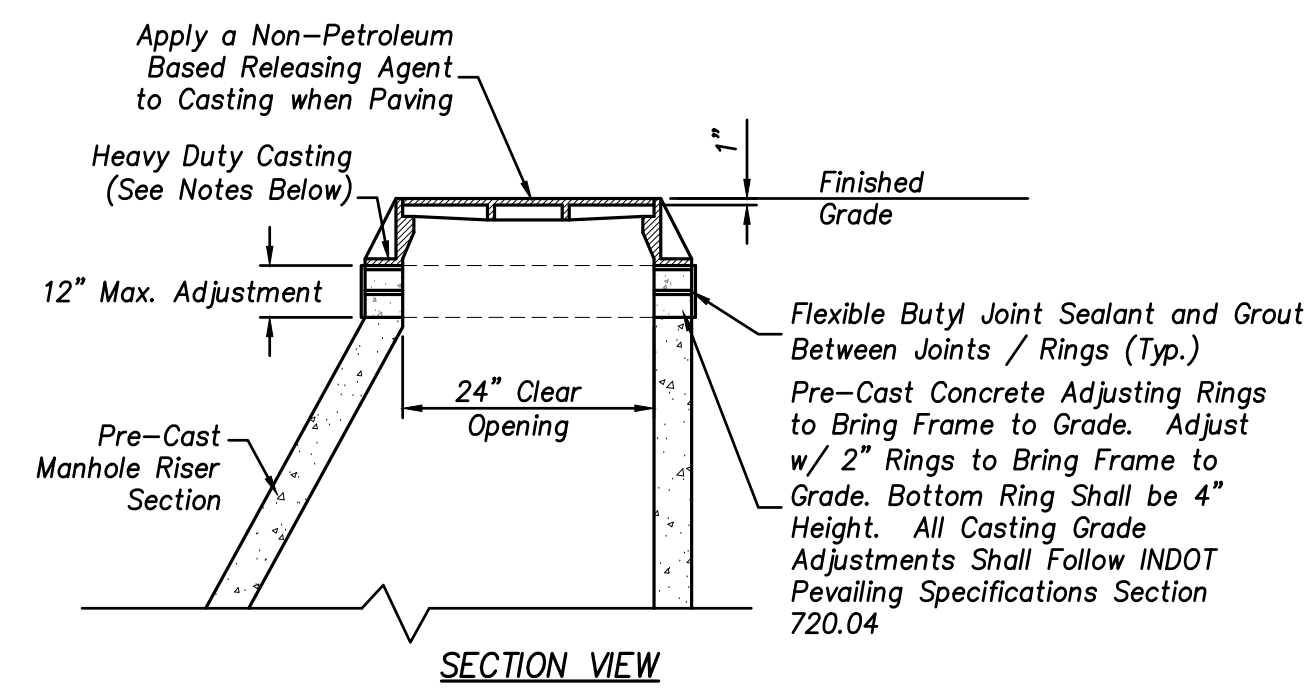
- NOTES:**
1. These trench and bedding details are for pipe structural requirements only. The contractor is solely responsible for safety of operations. The contractor shall slope trench walls, provide protective work boxes, and/or shore and brace all excavations as the contractor determines necessary for safety of operations, and in conformance to OSHA Regulation 29 C.F.R. 1926, Subpart P for Trench Safety Systems.
  2. All PVC pipe for sanitary sewers shall be installed in accordance with ASTM D2321.
  3. There shall be no rocks or stones greater than 2" in any dimension within 6" of the pipe wall or bell.
  4. Flexible Pipe: Embedment materials for bedding, haunching and initial backfill shall comply with the requirements of ASTM D2321, Classes I (INDOT #8 or #9), II (INDOT #53, #73, or B-Borrow), or III and shall be compacted as noted. Refer to pipe manufacturers recommended bedding and embedment material class type requirements. Removable flowable backfill shall be placed for all areas within 5 feet of pavements to 12" above pipe crown. Above this limit structure backfill shall be used.
  5. Rigid Pipe: Embedment materials for bedding, haunching and initial backfill shall comply with the requirements of ASTM C12 (VCP) Classes A, B, C or crushed stone (INDOT #8, #9 or B-Borrow) and shall be compacted as noted. Removable flowable backfill shall be placed for all areas within 5 feet of pavements to 12" above pipe crown. Above this limit structure backfill shall be used.
  6. Final backfill shall not contain debris, organic material, frozen material, unstable material or boulders or stones greater than 2" in any dimension. Flowable fill optional.
  7. The placement and compaction of backfill shall not cause displacement of the pipe.
  8. For multiple pipes in same trench:
    - a. Place bedding to Spring Line of first pipe across entire trench width.
    - b. Placement of next pipe, re-excavate trench as needed. Then place bedding as noted above.
    - c. For additional pipes repeat as required.
  9. Refer to INDOT Standard Specification Section 213 for flowable fill (removable) requirements.

**PIPE BEDDING DETAIL**  
(NOT TO SCALE)



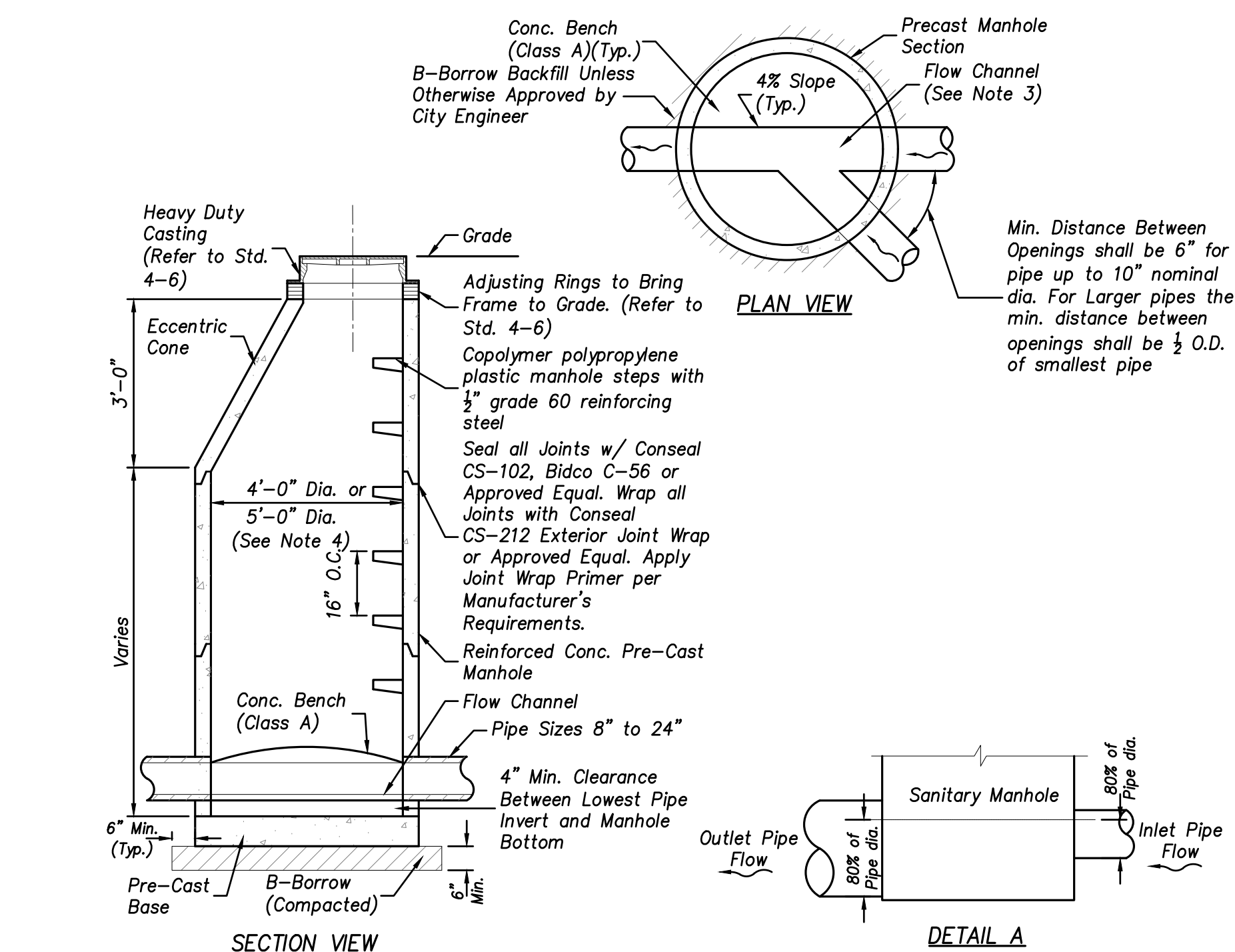
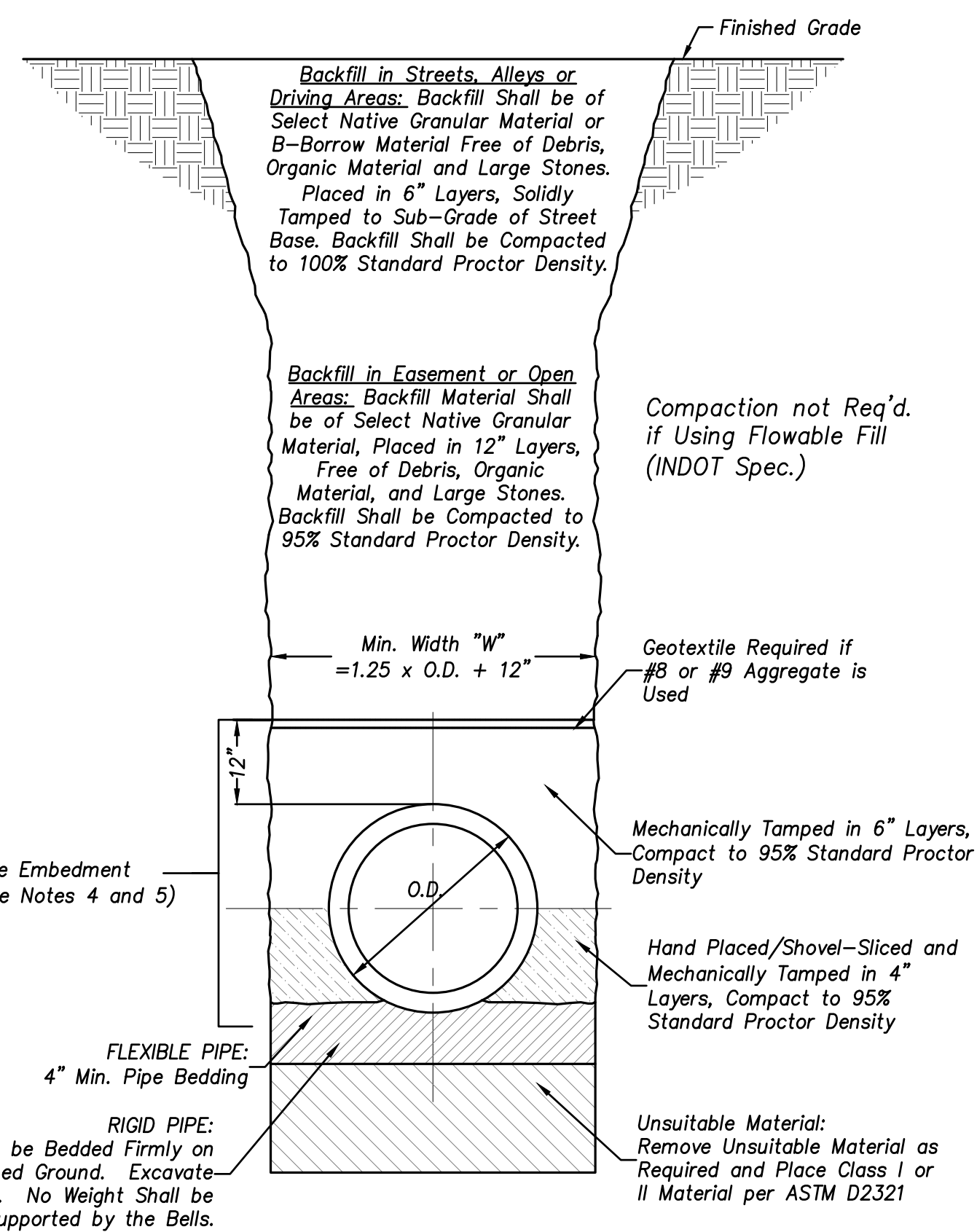
- NOTES:**
1. Insert a manhole in service lateral if its length exceeds 150 ft.
  2. The minimum service lateral size shall be 6" diameter, placed at a minimum slope of 0.61%. Larger sized service laterals shall be installed according to the minimum slopes required by 317 IAC 3-6-12(a).

**TYPICAL CLEAN-OUT**  
(NOT TO SCALE)



- NOTES:**
1. Manhole castings shall be Heavy Duty (H-20 rated). Castings shall be East Jordan Iron Works 1040A or Neenah R-1642.
  2. Casting lid shall be solid with two (2) concealed pickholes for sanitary or combined sewer manholes and two (2) open pickholes for storm sewer manholes. The text SANITARY shall be cast into the lid for the sanitary or combined sewer manholes. The text STORM shall be cast into the lid for storm sewer manholes.
  3. Where directed by the City, casting lids shall bolt down. Bolts shall be provided with an anti-seizing agent.
  4. For manholes 72-inch diameter and larger, the clear opening shall be 36-inch diameter. The casting shall be Heavy Duty (H-20 Rated). Casting shall be East Jordan Iron Works V-1600-5 or Neenah R-1741-D.
  5. For casting adjustments of existing brick manholes, remove old bricks down to a solid base. Then level with mortar and build up with pre-cast adjusting rings.
  6. When manholes are located in gravel or treelawn areas, provide a 5 foot diameter concrete collar, centered on the casting. Concrete shall be Class A.

**TYPICAL MANHOLE CASTING & ADJUSTING RINGS**  
(NOT TO SCALE)



- NOTES:**
1. All manholes shall be manufactured and installed in compliance with ASTM C-478.
  2. All pipe connections shall be made with integral resilient fittings complying with ASTM C-923.
  3. Flow channel shall conform to the shape of the connecting sanitary sewer and be made through the bottom surface of the manhole. The channel walls shall be formed or shaped to the full height of the crown of the outlet sewer.
  4. Refer to manhole size vs. pipe size chart on Standard 4-2.
  5. Completed manholes shall be tested with negative pressure (vacuum) in accordance with ASTM C-1244-93.
  6. At manholes where a smaller diameter sewer joins a larger diameter sewer, the invert of the larger sewer shall be lowered such that the elevation at 80% of the pipe diameter of both sewers is matched (Refer to Detail A above).
  7. The Design Engineer is to be responsible for setting pipe invert elevations to account for minor losses through the manhole.

**TYPE A MANHOLE - STANDARD PRE-CAST**  
SCALE: 3/8" = 1'-0"

**INVERNESS WOODS  
 PHASE TWO**

**STORM WATER POLLUTION  
 PREVENTION PLAN (SWPPP)**

PROJECT:

SHEET TITLE:

DRAWN BY:  
**ZDH**

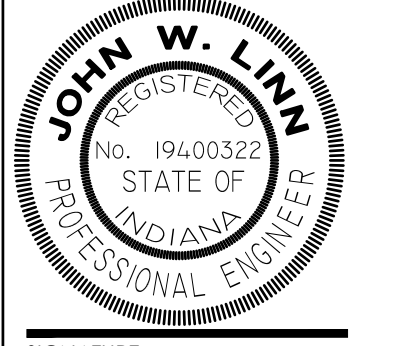
DESIGNED BY:  
**ZDH**

PM REVIEW:  
**RAN**

QA/QC REVIEW:

DATE:  
**06-29-2021**

SEAL:



SIGNATURE:  
*John W. Linn*

DATE:  
**06-29-2021**

SCALE:

HORIZ: 1"=60'

VERT:

ACI JOB #

**21-0242**

SHEET NO.

**12 of 17**

**GENERAL NOTES**

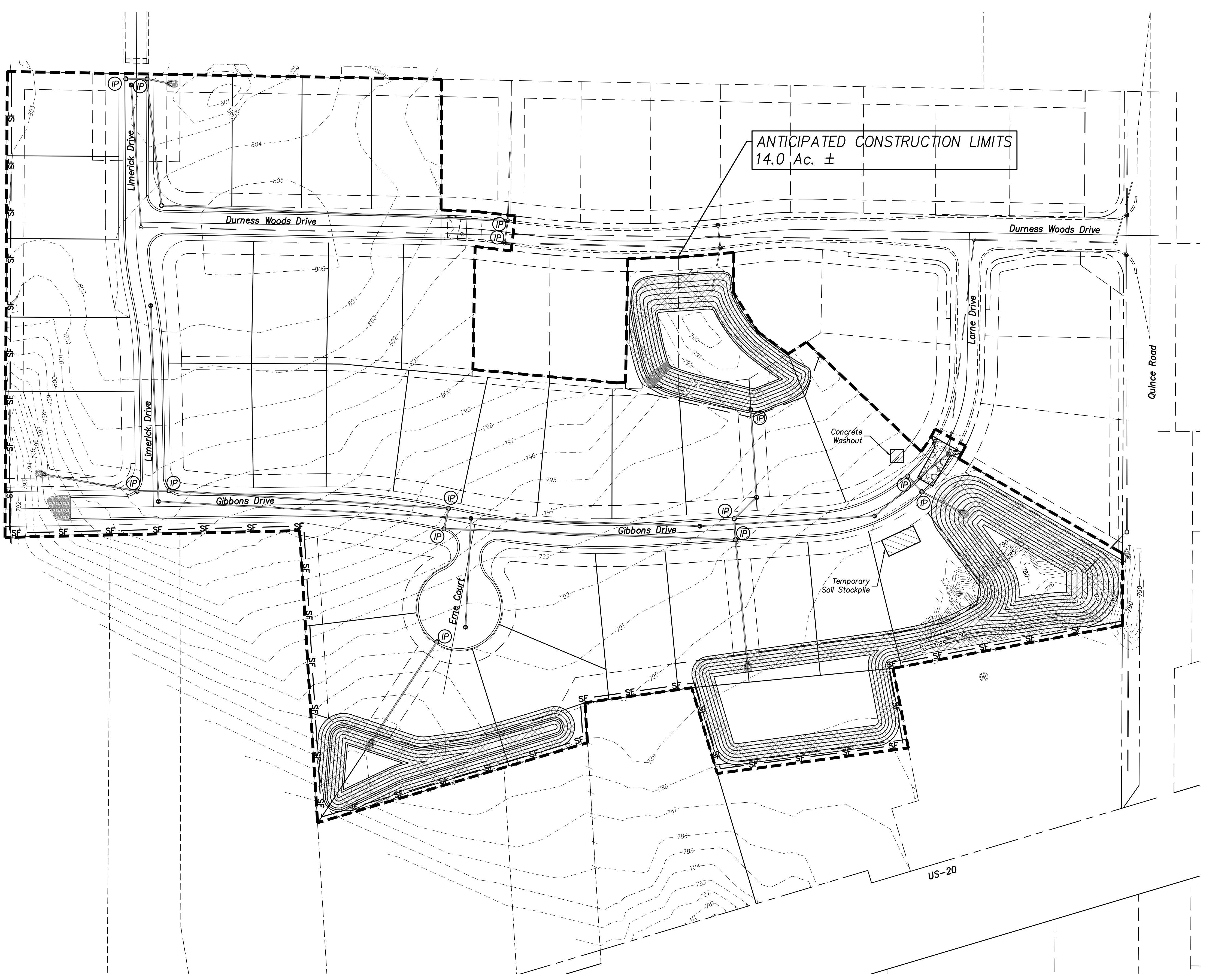
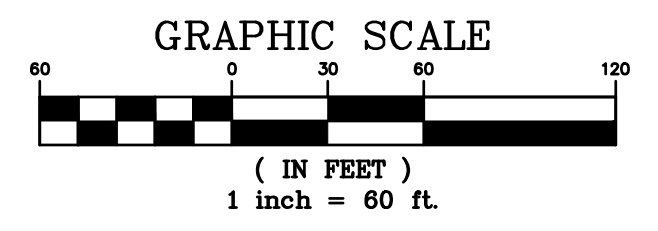
- All erosion control measures shall be implemented in accordance with this plan and shall comply with the St. Joseph County and 327 IAC 15-5 or "Rule 5" as outlined in the Indiana Storm Water Quality Manual and on the following website for best management practices (BMPs): [www.in.gov/idem/4902.htm](http://www.in.gov/idem/4902.htm).
- The Owner must notify IDEM's Rule 5 Coordinator at (317) 233-1864, the local Soil & Water Conservation District (SWCD) at (574) 291-7444 Ext. 3, and the St. Joseph County Engineering Department at (574) 235-9251 at least 48 hours prior to any land disturbing activity and upon completion so that final site inspections may be performed for compliance.
- If construction is not completed within 5 years or if an early release from the permit is not received as specified under 327 IAC 15-5-8, the Owner shall renew the permit. Once all construction is completed for the entire project, the Owner must file the IDEM "Notification of Termination" form to St. Joseph County who will process this form and forward to IDEM.
- A temporary construction entrances shall be installed and maintained to minimize the amount of soil tracked onto public/private roadways. A tentative location has been shown on the drawing. The Contractor shall submit actual location(s) to the Owner for approval. Entrance(s) shall be installed prior to any other construction activity.
- Storm sewer inlets within the construction limits and existing inlets nearby that may be impacted by construction shall be protected as specified on this plan or an approved equal. The intent of this measure is to prevent sediment from entering the drainage system.
- Until the project is accepted by the Owner, the Contractor shall maintain all erosion control measures to prevent sediment from entering public and private storm sewers and from leaving the project site. Contractor shall implement and maintain any additional measures at the request of the Local and/or State Stormwater and Erosion Control Inspectors at no additional cost.
- The location of silt fence shown on the drawing shall act as a guide for the Contractor to follow. Actual field conditions shall dictate the location and amount of silt fence required to prevent sediment from entering public and private storm sewers and from leaving the project site. Silt fence shall also be installed at specific down slope areas as shown on the plan. Silt fence or other appropriate sediment barriers shall be installed a minimum of 10 feet from the toe of slope of any onsite or offsite soil stockpile, borrow and/or disposal areas.
- Locations for temporary topsoil/soil stockpiling, concrete washout, temporary construction staging, and dewatering operations (if required) shall be determined by the Contractor and Owner prior to construction and subject to change pending site conditions. These locations shall be provided to St. Joseph County Highway Department prior to construction of said items and adequate protection installed to protect public and private drainage systems.
- The location shown on the plan for the concrete washout structure is tentative and subject to change by the contractor and owner prior to construction. See "Concrete Washout" detail.
- All areas disturbed by construction shall be stabilized with seeding measures. Temporary Seeding shall take place as soon as possible on any bare or thinly vegetated areas which have less than 70 percent cover and will remain inactive for a period of 15 days or more. Temporary and Permanent Seeding shall be in accordance with the Indiana Storm Water Quality Manual (See Sheet 14A).
- Erosion Control Blankets, where specified and on any slope 4:1 or greater, shall be North American Green DS-150 or approved equal. Contractor shall follow the manufacturer's guidelines for installation and maintenance (See Detail on Sheet 14A).
- The Rule 5 Permit cannot be terminated until all lots within the scope of work have been constructed and stabilized.

**INSPECTIONS / REPORTING**

The Owner shall require the Contractor to review all erosion control devices on a weekly basis and/or within 24 hours of every 1/8 inch rainstorm event. The Contractor shall use an approved evaluation form for all site reviews. Any resulting problems shall be immediately reviewed and corrected by the Contractor.

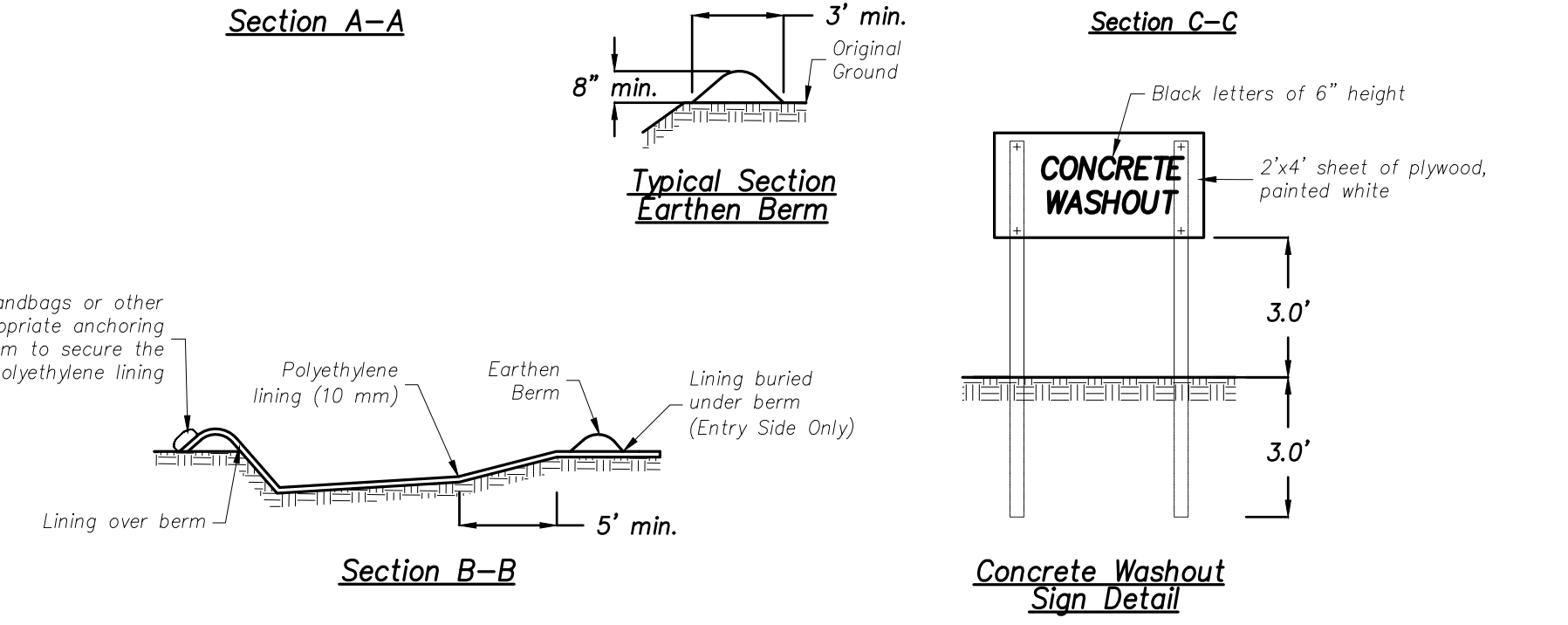
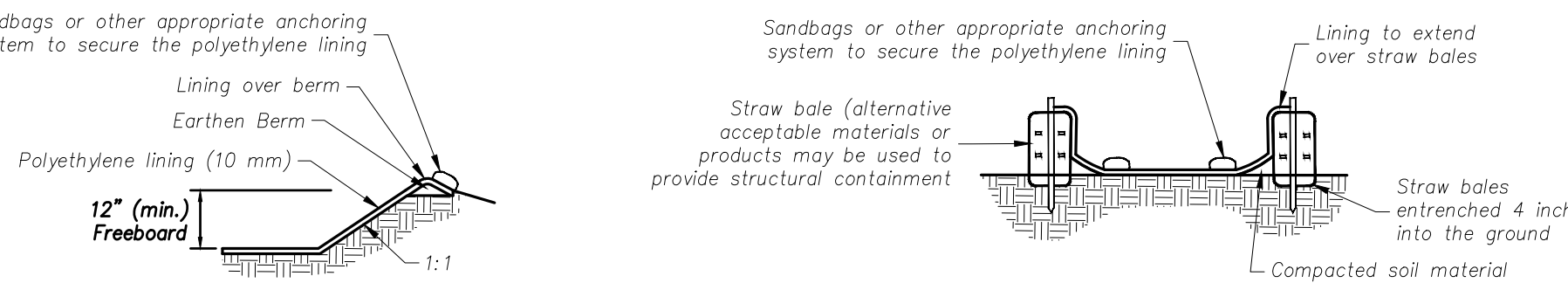
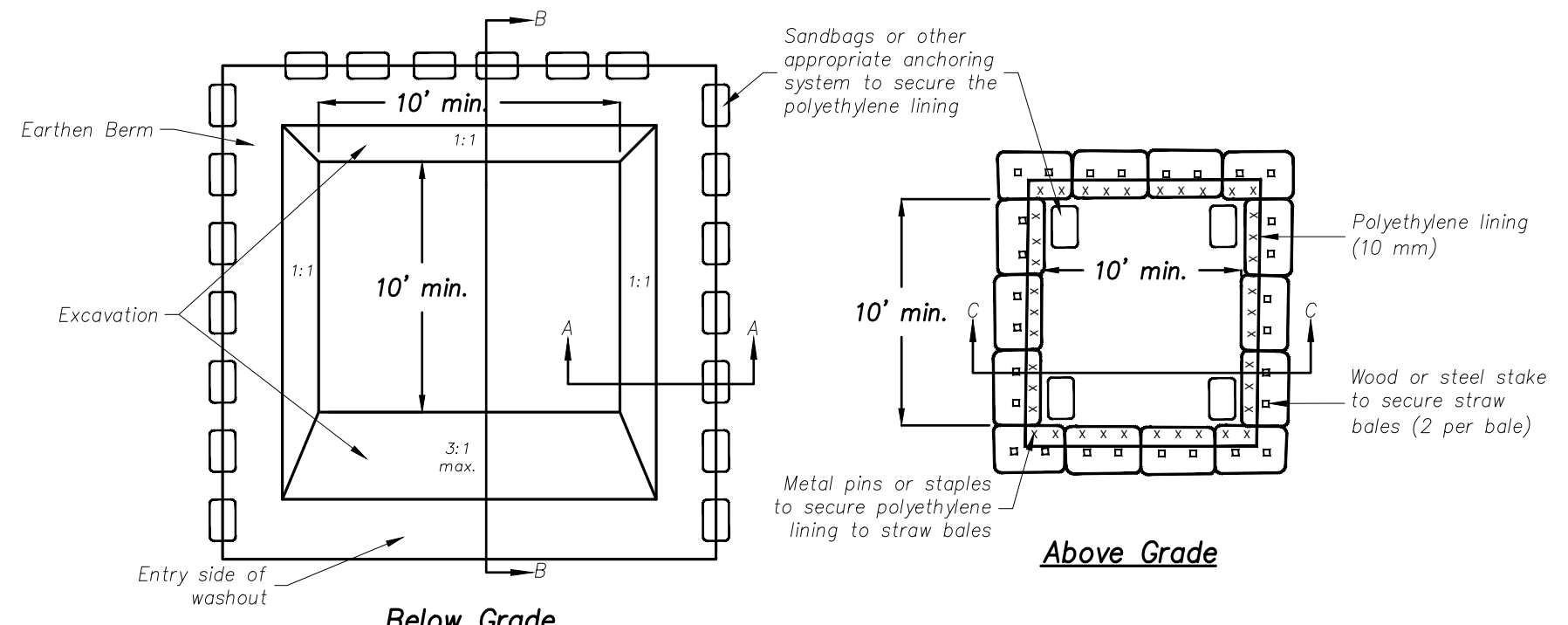
**LEGEND**

- SF Temporary Silt Fence
- IP Temporary Inlet Protection
- Temporary Construction Entrance
- Erosion Control Blankets
- Rip Rap



ANTICIPATED CONSTRUCTION LIMITS  
 14.0 Ac. ±





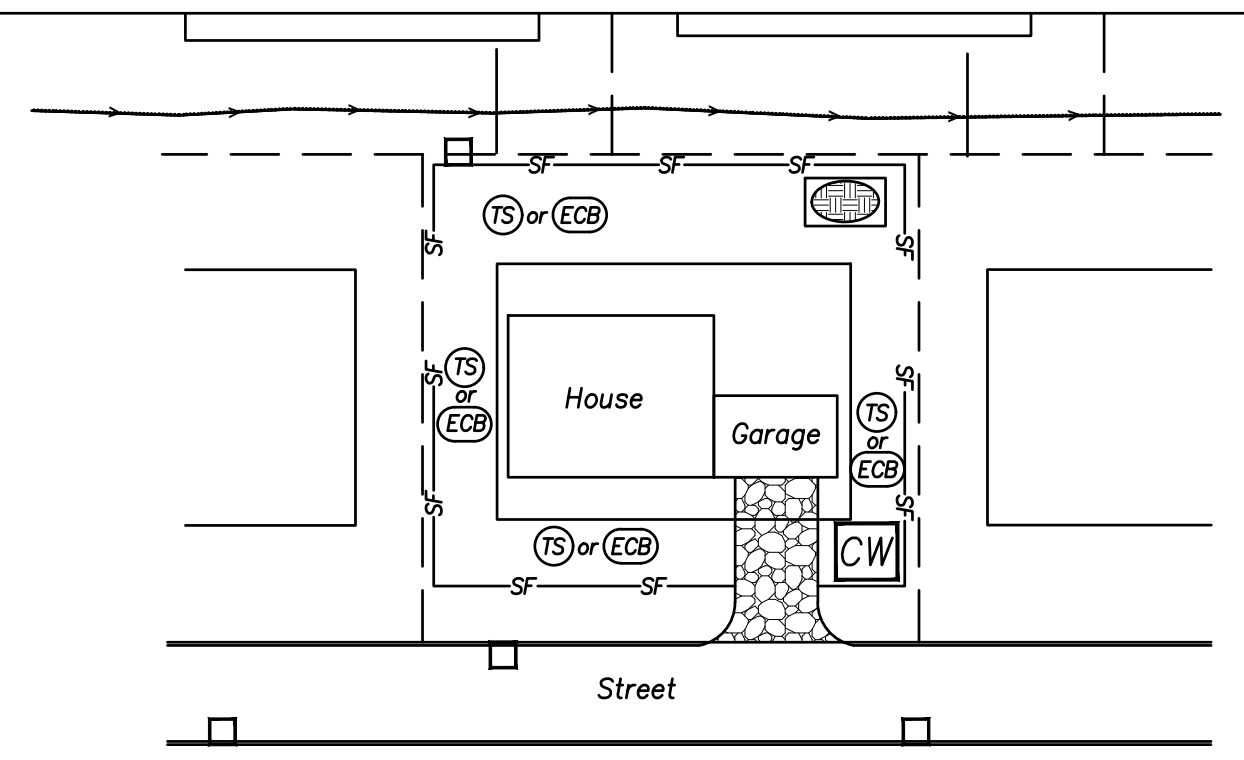
**INSTALLATION NOTES**

1. Dependent upon the type of system, either excavate the pit or install the containment system. For prefabricated containers, locate, and install according to the manufacturer's recommendations.
2. A base shall be constructed and prepared that is free of rocks and other debris that may cause tears/punctures in the polyethylene lining.
3. Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
4. Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
5. Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
6. Install signage that identifies concrete washout areas and post signs directing contractors and suppliers to designated locations.
7. Where necessary, provide stable ingress and egress or alternative approach pad for concrete washout systems.

**MAINTENANCE**

1. Inspect daily and after each storm event - inspect the integrity of the overall structure and containment system where applicable.
2. Inspect the system for leaks, spills, and tracking of soil by equipment, and the polyethylene lining for failure, including tears and punctures.
3. Once concrete wastes harden, remove and dispose of the material.
4. Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
5. Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
6. Dispose of all the concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
7. The plastic lining should be replaced after every cleaning; the removal of material will usually damage the lining.
8. The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
9. Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their national pollutant discharge elimination system permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
10. Prefabricated units are often pumped and the company supplying the unit provides this service.
11. Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify violators and take appropriate action.
12. When concrete washout systems are no longer required, the concrete washout system shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
13. Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

**CONCRETE WASHOUT STRUCTURE**  
(NOT TO SCALE)



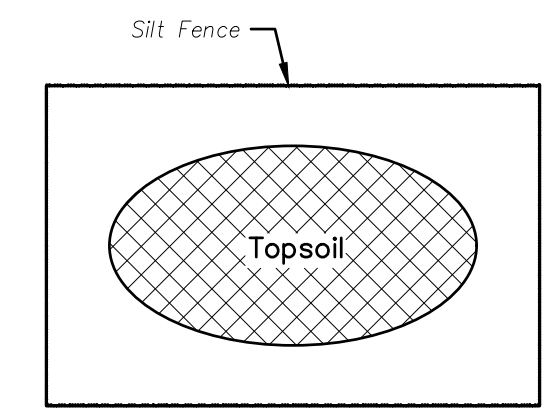
**LEGEND**

- Property Lines
- Constructed Building Pad
- sf- Silt Fence or Filter Sock
- Stream/Ditch
- Gravel Construction Entrance
- Soil Stockpile Protection
- Inlet Protection
- Temporary Seeding
- Erosion Control Blanket
- Concrete Washout Area

**NOTES**

1. Erosion control measures must be functional and maintained throughout construction.
2. Erosion Control Blanket shall be used on slopes greater than 4:1.
3. Install Silt Fence or Filter Sock as necessary.
4. Post Notice of Intent and place rain gauge on site prior to start of construction.
5. Remove sediment from street at the end of each work day. Do not flush bulk sediments with water.

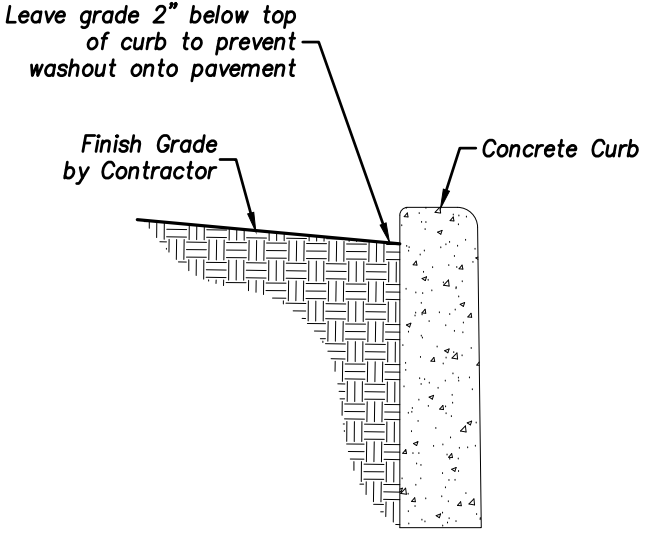
**LOT EROSION CONTROL PROTECTION SCHEMATIC**  
INSTALLED BY LOT OWNER (TYPICAL)  
(NOT TO SCALE)



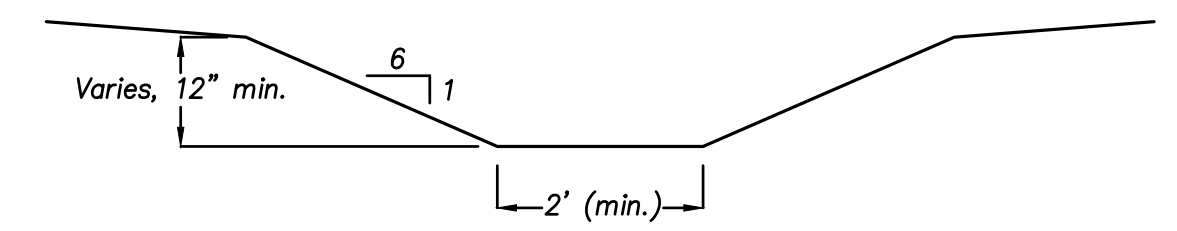
**TOPSOIL STOCKPILE DETAIL**  
(NOT TO SCALE)

**NOTE:**

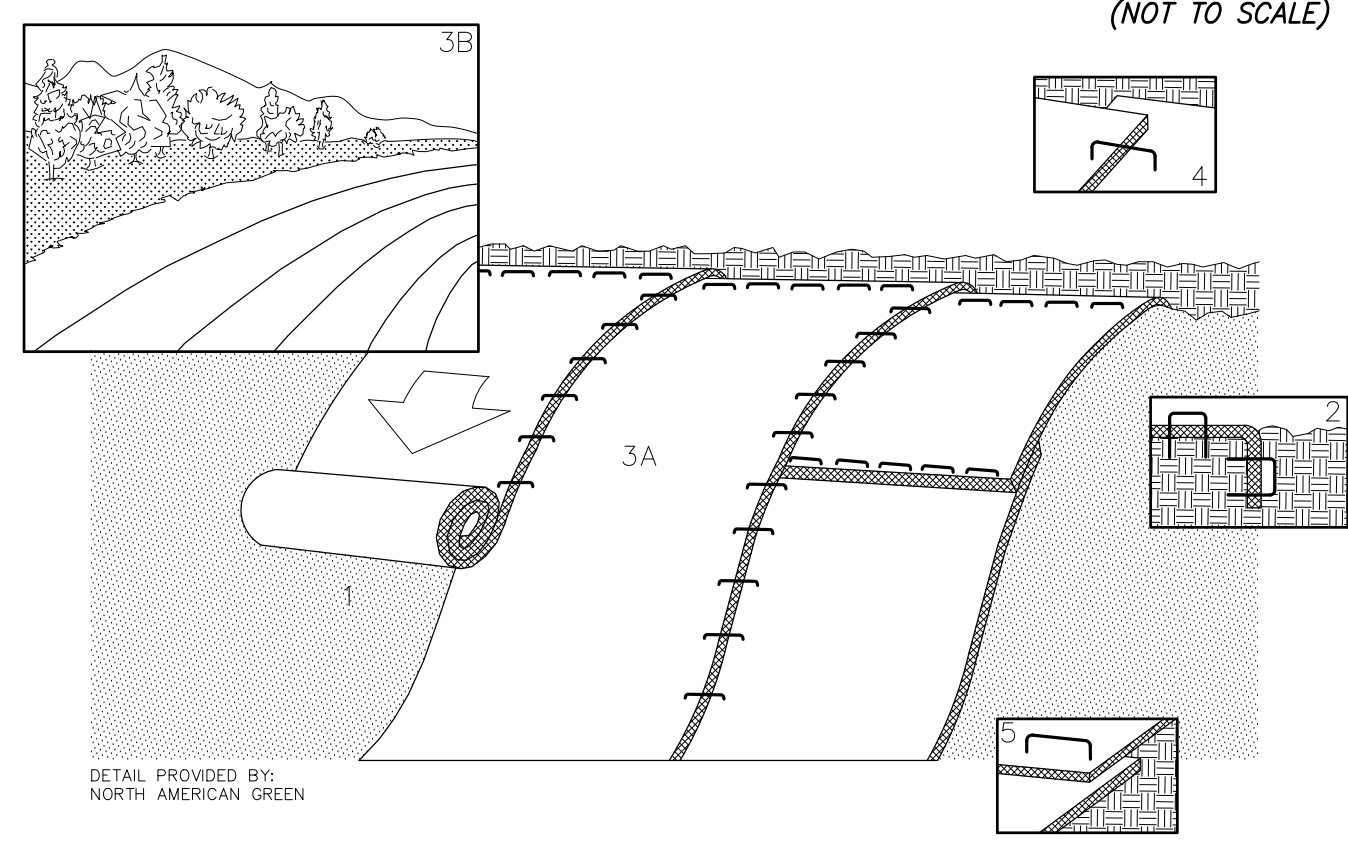
If straw bales are utilized instead of silt fence, the bales shall be placed a minimum of 10 feet from the toe of slope. Each bale shall be entrenched a minimum of 4 inches into subsoil and shall be anchored with (2) 3/8-inch long steel rebars or 2x2 inch wood stakes driven through the bale. The minimum bale size shall be 14"x18"x36".



**CURB BACKFILL DETAIL**  
(NOT TO SCALE)



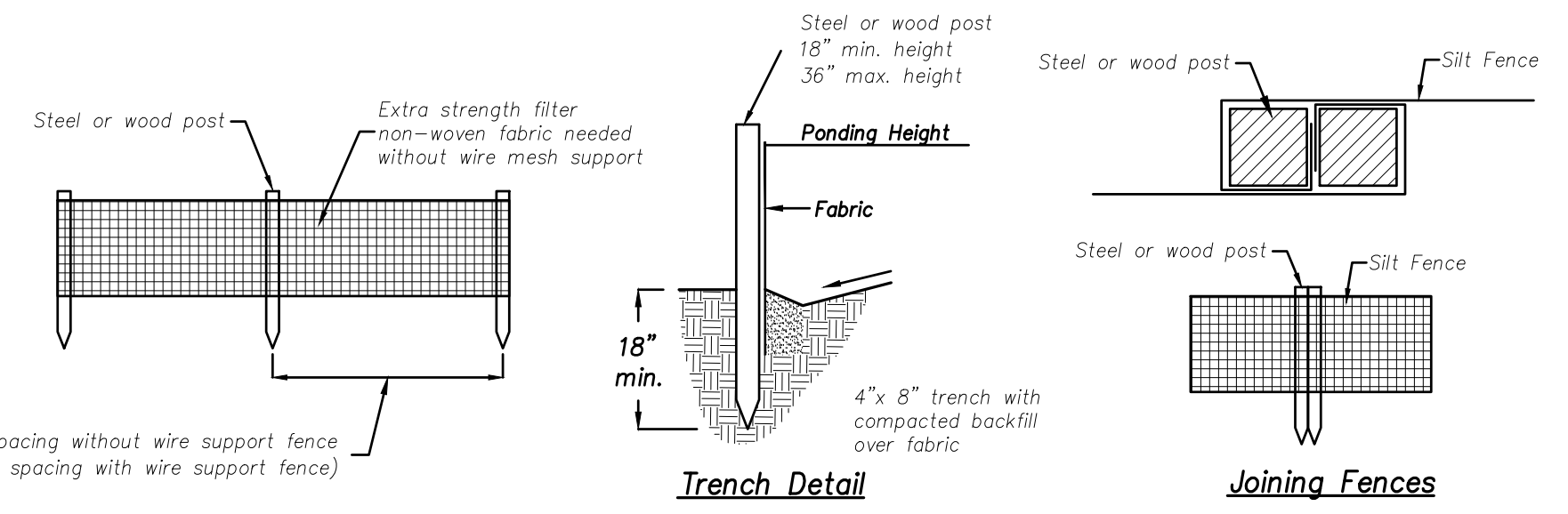
**TYPICAL DRAINAGE SWALE**  
(NOT TO SCALE)



**INSTALLATION NOTES**

1. Prepare soil before installing blankets, including application of lime, fertilizer, and seed. When using cell-o-seed do not seed prepared area. Cell-o-seed must be installed with paper side down.
2. Begin at the top of the slope by anchoring the blanket in 6" deep x 6" wide trench. Backfill and compact the trench after stapling. Follow the manufacturer's recommendations for size and type of staples and staple pattern for securing the blankets.
3. A) Roll the blankets down the bank as shown.  
B) Blankets may be installed horizontally down the slope of the drainage swale.
4. The edges of parallel blankets must be stapled with approximately 2" overlap.
5. When blankets must be spliced down the slope, place blanket end over end (shingle style) with approximately 4" overlap. Staple through overlapped area, approximately 12" apart.

**SLOPE STABILIZATION**  
EROSION CONTROL BLANKETS  
(NOT TO SCALE)



**INSTALLATION NOTES**

1. Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point.
2. Excavate an 8-inch deep by 4-inch wide trench along the entire length of the fence. (Installation by plowing is acceptable)
3. Install silt fence with the filter fabric located on the up-slope side of the excavated trench and the support posts on the down-slope side of the trench.
4. Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 12 inches of the filter fabric should extend into the trench.
5. Lay the lower 4 inches of fabric on the bottom of the trench and extend it toward the up-slope side of the trench.
6. Backfill the trench with soil material and compact it in place.

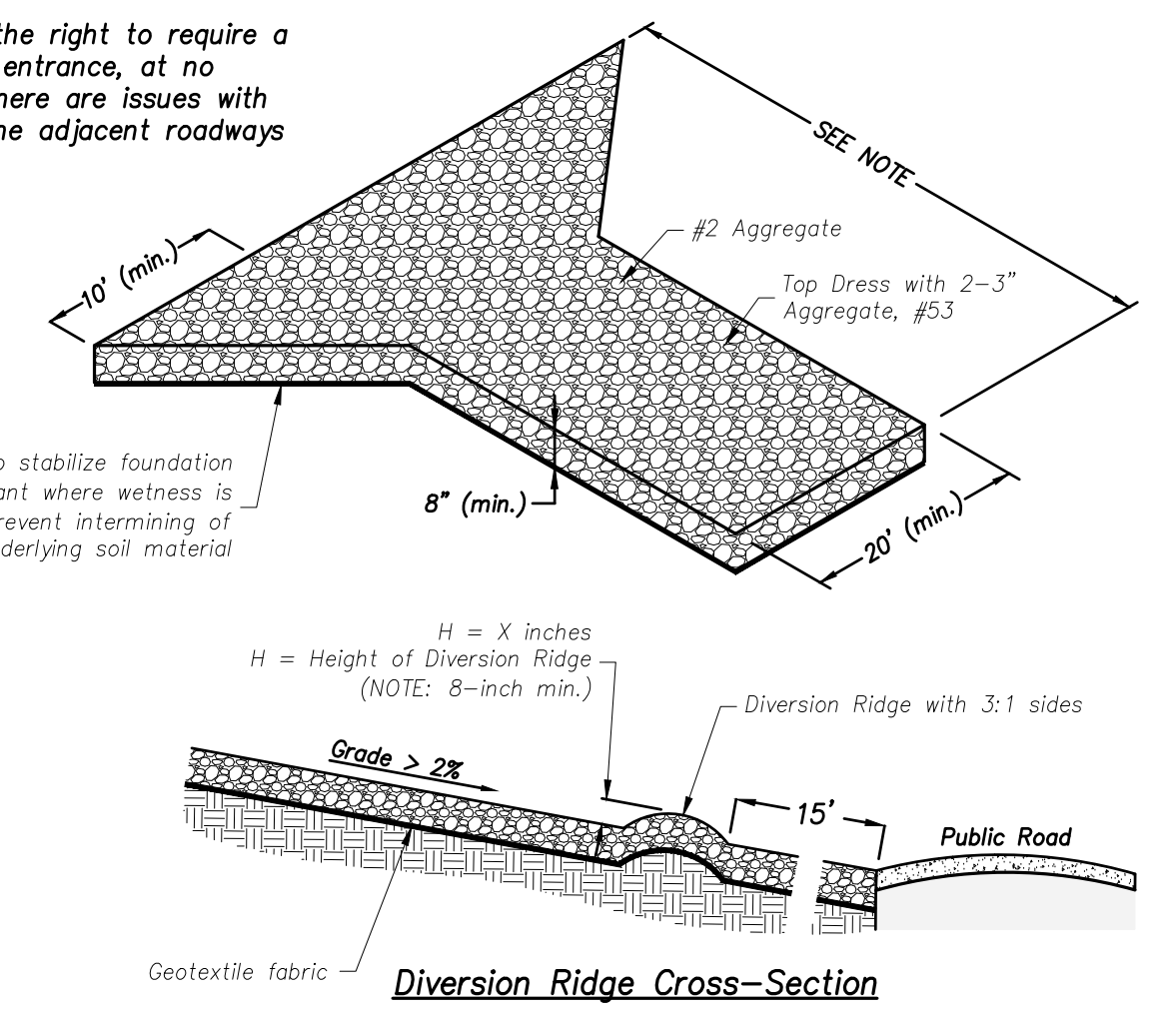
**NOTE:**

If the silt fence is being constructed onsite, attach the filter fabric to the support posts and attach wood lath to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following Steps 1 through 6 above.

**TEMPORARY SILT FENCE**  
DETAIL  
(NOT TO SCALE)

**NOTE:**

Developer reserves the right to require a longer construction entrance, at no additional cost, if there are issues with tracking soil onto the adjacent roadways



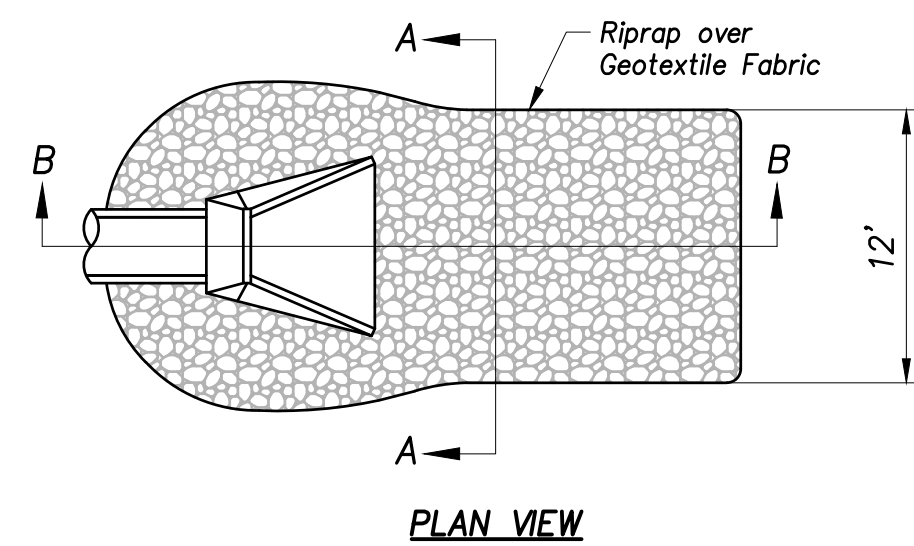
**INSTALLATION NOTES**

1. Remove all vegetation and other objectionable material from the foundation area.
2. Grade foundation and crown for positive drainage. If the slope of the construction entrance is toward a public road and exceeds two percent, construct an 8-inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area about 15 feet from the entrance to divert runoff away from the road.
3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
5. Place specified aggregate to the dimensions shown leaving the surface smooth and sloped for drainage.
6. Top-dress the first 50 feet adjacent to the public roadway with 2-3 inches of washed #53 aggregate [optional, used primarily where the purpose of the pad is keep soil from adhering to vehicle tires]
7. Where possible, divert all storm water runoff and drainage from the pad to a sediment trap or basin.

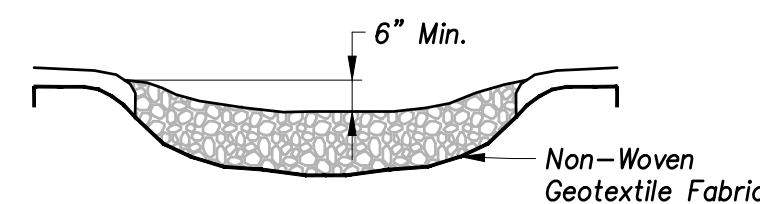
**MAINTENANCE**

1. Inspect daily.
2. Reshape pad as needed for drainage and runoff control.
3. Top dress with clean aggregate as needed.
4. Immediately remove mud and sediment tracked or washed onto public roads.
5. Flushing should only be used if the water can be conveyed into a sediment trap or basin

**TEMPORARY CONSTRUCTION ENTRANCE**  
(NOT TO SCALE)

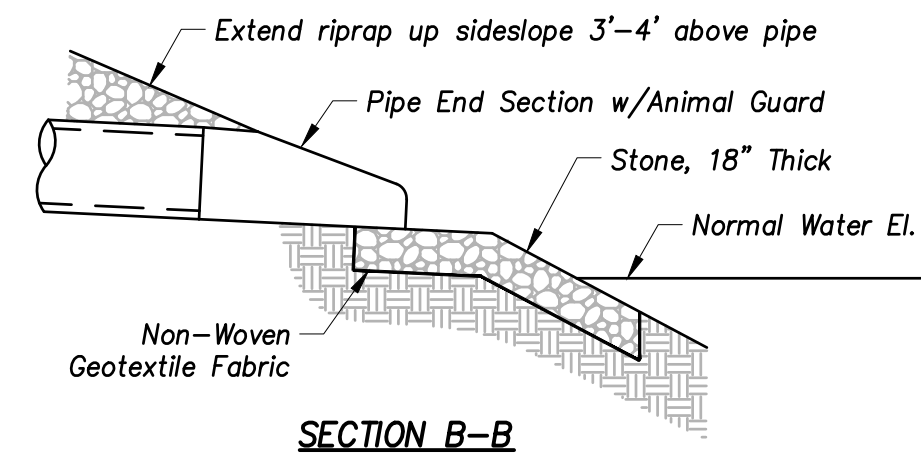


PLAN VIEW



SECTION A-A

PIPE SIZE	AVERAGE STONE DIA.	APRON WIDTH	APRON LENGTH
8 in.	3 in.	6 ft.	7 ft.
12 in.	5 in.	6 ft.	12 ft.
15 in.	6-7 in.	6 ft.	15 ft.
18 in.	8 in.	6 ft.	18 ft.
24 in.	10 in.	8 ft.	22 ft.
30 in.	12 in.	10 ft.	28 ft.
36 in.	14 in.	12 ft.	32 ft.



SECTION B-B

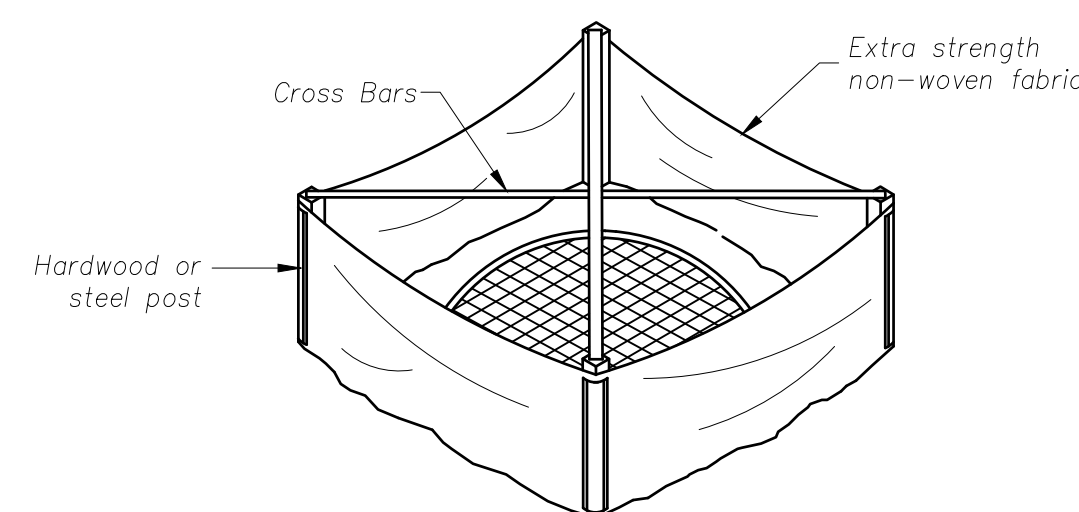
**INSTALLATION**

1. Prepare subgrade – remove vegetation and debris, excavate to bottom of bedding material, compact any fill to the density of the surrounding material and smooth the foundation.
2. Place geotextile, overlapping edges at least 12 inches and secure with anchor pins at 3' spacing along overlap.
3. Place riprap in one operation. Do not dump through chutes or use any method that causes segregation of stone sizes. If geotextile fabric tears, repair immediately.
4. Blend riprap surface smoothly with surrounding area to eliminate protrusions or overfalls.

**MAINTENANCE**

1. Inspection should occur at least once a week and following each 1/2" or more rain event.
2. Inspect for stone displacement; replace stones ensuring placement at finished grade.
3. Check for erosion or scouring around sides of the apron; repair immediately.
4. Check for piping or undercutting; repair immediately.

**RIPRAP APRON & PIPE END SECTION TREATMENT**  
(Not To Scale)



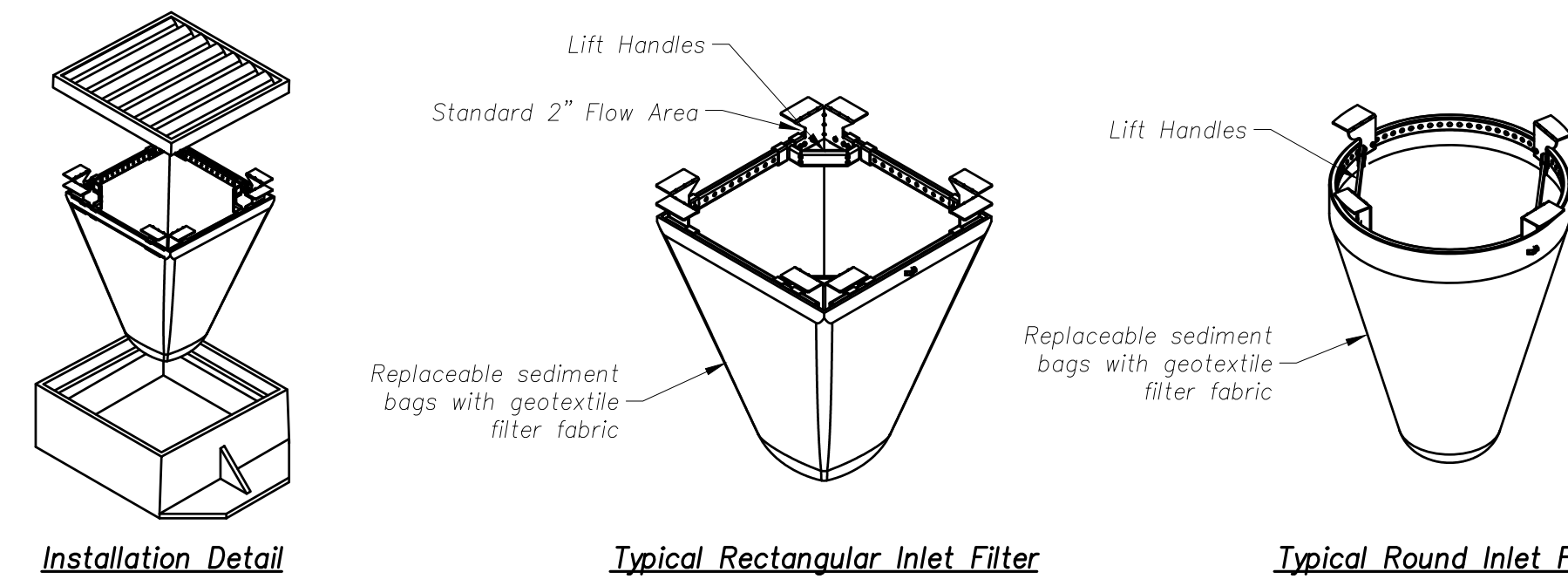
**INSTALLATION NOTES**

1. Dig trench around perimeter of inlet.
2. Drive posts into soil and stretch geotextile fabric tightly between each post.
3. Place bottom 12" of geotextile fabric into trench.
4. Backfill with soil material and compact. Brace as necessary.
5. The frame shall be wrapped with one continuous piece of geotextile fabric and a 2' overlap shall be provided.

**MAINTENANCE NOTES**

1. Inspection should occur at least once a week and following each 1/2" or more rain event.
2. If fence fabric tears, starts to decompose, or in anyway becomes ineffective, replace the affected portion immediately.
3. Remove deposited sediment to provide storage for next storm event.
4. When the contributing drainage area has been stabilized, remove the geotextile box and sediment deposits, final grade area, and stabilize immediately.

**TEMPORARY INLET PROTECTION PRIOR TO CURB/PAVING**  
SILT FABRIC CURB SEDIMENT BARRIER  
(NOT TO SCALE)



Installation Detail

Typical Rectangular Inlet Filter

Typical Round Inlet Filter

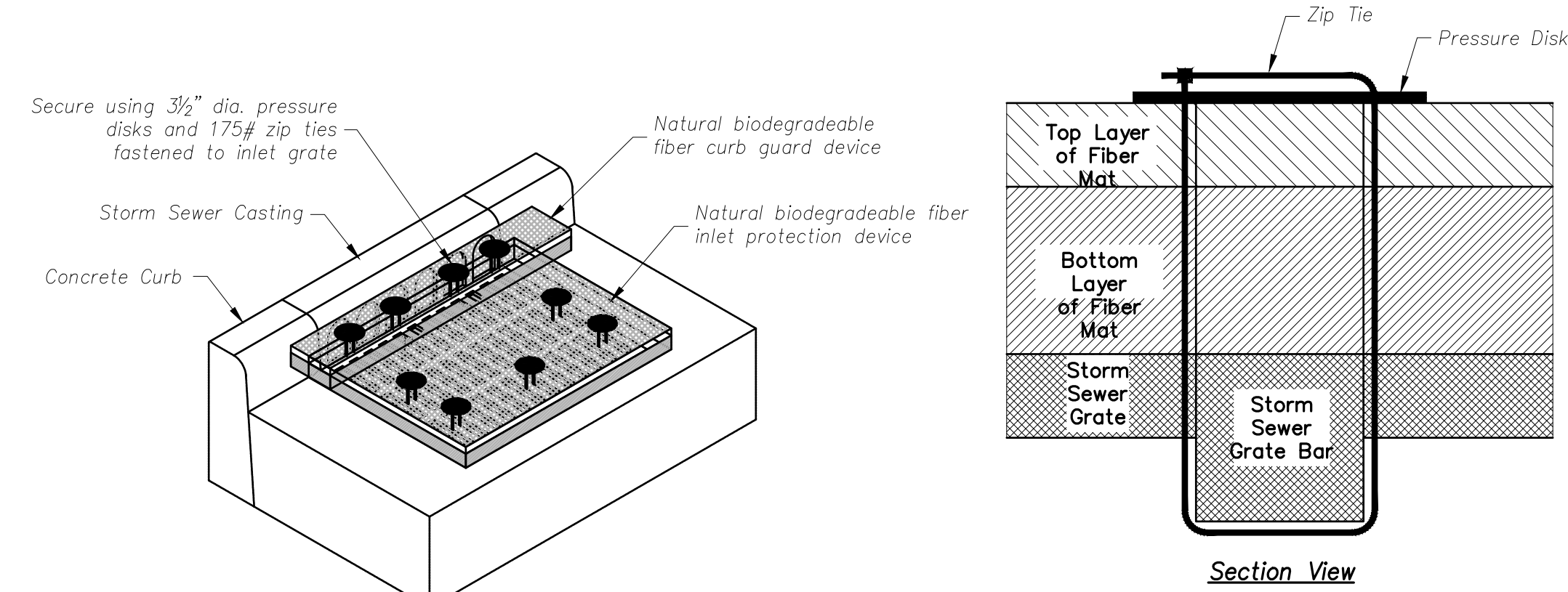
**INSTALLATION NOTES**

1. Prior to installation, Contractor shall submit brand and model information to Owner for approval prior to installation. Install per manufacturer recommendations.
2. Remove grate and clean ledge of the casting frame or drainage structure.
3. Drop frame and sediment bag insert onto load bearing lip of casting or concrete structure
4. Re-install grate and confirm it is elevated no more than thickness of insert hangers.

**MAINTENANCE NOTES**

1. Inspection should occur at least once a week and following each 1/2" or more rain event.
2. Empty the sediment bag if more than half filled with sediment and debris.
3. Remove the grate, engage the lifting bars or handles and lift from the drainage structure, and dispose of any sediment or debris in accordance with EPA Guidelines.
4. Remove any caked on silt from the sediment bag and reverse flush the bag with medium spray for optimal filtration.
5. Replace the bag if torn or punctured to 1/2" diameter or greater on the lower half of the bag.
6. When the contributing drainage area within 50 feet upstream of the inlet has been stabilized, remove insert (basket) and properly dispose of sediment deposits.

**TEMPORARY INLET PROTECTION AFTER CURB/PAVING**  
FRAME AND SEDIMENT BAG INSERT  
(NOT TO SCALE)



Section View

**INSTALLATION NOTES**

1. Install fiber mat per manufacturer recommendations.
2. Lay fiber mat firmly in place to cover both the inlet grate and overflow area, cut to extend 1" minimum to 3" maximum from edge of grate.
3. Install pressure disc anchors per manufacturer at recommended anchor locations and use zip ties to fasten to grate.

**MAINTENANCE NOTES**

1. Inspection should occur at least once a week and following each 1/2" or more rain event.
2. Broom collected material off filter unit surfaces and away from edges.
3. Remove sediment and debris collected around filter units and dispose of legally off site.
4. Replace filter unit if it becomes too clogged with sediment to perform properly.

**TEMPORARY CURB INLET PROTECTION**  
FIBER MAT  
(NOT TO SCALE)

# CONSTRUCTION / STORM WATER POLLUTION PREVENTION PLAN

## ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (SECTION A)

- A1 PLAN INDEX SHOWING LOCATIONS OF REQUIRED ITEMS**  
This Sheet.
- A2 11x17 INCH PLAT SHOWING BUILDING LOT NUMBERS/BOUNDARIES AND ROAD LAYOUT/NAMES**  
See "Secondary Plat".
- A3 NARRATIVE DESCRIBING PROJECT NATURE AND PURPOSE**  
The proposed project consists of the construction a new residential subdivision along with associated roadways, utilities, and storm sewers. Construction includes earthwork and construction of new County roadway, storm sewer, sanitary sewer, and retention basins.
- A4 VICINITY MAP SHOWING PROJECT LOCATION**  
See Sheet 1 "Cover Sheet".
- A5 LEGAL DESCRIPTION OF THE PROJECT SITE**  
Quarter: SE Section: 26  
Township: 38N Range: 1E Civil Township: Warren  
LATITUDE: 41° 45' 05" N LONGITUDE: 86° 05' 33" W
- A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS**  
See Plan and Profile Sheets 6-9
- A7 HYDROLOGIC UNIT CODE-14 DIGIT**  
HUC14 07120001010050
- A8 NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS**  
Not aware of any at this time.
- A9 SPECIFIC POINTS WHERE STORM WATER DISCHARGE WILL LEAVE THE SITE**  
See Drainage Plan on Sheet 5
- A10 LOCATION AND NAME OF ALL WETLANDS, LAKES AND WATER COURSES ON AND ADJACENT TO THE SITE**  
See Sheet 17 for Wetlands Map.
- A11 IDENTIFY ALL RECEIVING WATERS**  
Groundwater and ultimately the St. Joseph River.
- A12 IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUNDWATER**  
The proposed retention basins discharge to groundwater via stormwater percolation into the subsoils.
- A13 100 YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES**  
100 year flood not present, published FEMA FIRM Map identifies the project site located in "Area of Minimal Flood Hazard". Panel No. 18141C0160D eff. 1/6/2011
- A14 PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK DISCHARGE**  
10yr pre = ±3.4 cfs 10yr post = ±10.2 cfs
- A15 ADJACENT LAND USE, INCLUDING UPSTREAM WATERSHED**  
SOUTH - Residential/Commercial WEST - Residential/Commercial  
NORTH - Residential EAST - Residential
- A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS**  
See "Anticipated Construction Limits" on Sheet 12.
- A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER**  
Wooded area
- A18 SOILS MAP INCLUDING DESCRIPTIONS AND LIMITATIONS**  
See Sheet 17 for Soils Map.
- A19 LOCATIONS, SIZE AND DIMENSIONS OF PROPOSED STORM WATER SYSTEMS**  
See Drainage Plan on Sheet 5.
- A20 PLAN FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT**  
None are anticipated.
- A21 LOCATIONS OF PROPOSED SOIL STOCKPILES, BORROW AND/OR DISPOSAL AREAS**  
See Sheet 12 - General Note #8.
- A22 EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO SHOW DETAILED DRAINAGE PATTERNS**  
See Drainage Plan on Sheet 5.
- A23 PROPOSED FINAL TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO SHOW DETAILED DRAINAGE PATTERNS**  
See Drainage Plan on Sheet 5.

GENERAL CONSTRUCTION ACTIVITY SCHEDULE					
CONSTRUCTION TASKS (ANTICIPATED)	2021	2021	2021	2021	2021
	JULY	AUGUST	SEPTEMBER	OCTOBER	
Temporary Construction Entrances					
Site Fencing/Inlet Protection Established (Existing Inlets)					
Cleaning and Removal Activities					
Permanent Erosion Control Measures					
Erosion/Sediment Maintenance					
Construction Activities					

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

- B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES**  
The primary pollutant associated with construction activities is sediment. Additional pollutants may be generated by construction vehicle operation and maintenance (e.g. fueling, changing hydraulic fluids and oils); concrete washout; improper storage of construction materials; improper disposal of construction trash and debris; improper application or over application of fertilizers and pesticides; sanitary chemicals and waste from portable toilets, and improper storage, application, and disposal of soluble materials or other materials that may be mobilized by storm water runoff. Equipment and fuel shall be stored in a centralized location and the Contractor shall institute methods and procedures to prevent discharge of pollutants.
- B2 SEQUENCE DESCRIBING STORM WATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES**  
See "Erosion and Sediment Control Sequence and Implementation" on this sheet.
- B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS**  
See Sheet 12 and General Note #4 on the same sheet.
- B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS**  
Preliminary grading and stabilization must be completed to ensure adequate drainage to the temporary or permanent runoff conveyance facilities. Silt fencing must also be implemented prior to any construction activity to ensure silt collection. Stabilize disturbed areas directly after earth disturbing activities, apply temporary seed to areas scheduled to be idle for up to one year. Permanently seed all areas that are at final grade, phase projects where each subsequent phase will not begin for 8 months or more, and areas to be idle for more than one year. Erosion control measures shall be installed in sheet flow areas. See SWPPP Sheets for details as well as installation and maintenance procedures. Seeding/Sodding shall be in accordance with the Indiana Storm Water Manual.
- B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS**  
Adequate erosion control measures must be installed within concentrated flow areas prior to opening for runoff acceptance. Drainage swales shall be stabilized with erosion control blankets, where specified, prior to opening to drainage flow, and drainage basins with side slopes of 4:1 or steeper shall be stabilized with erosion control blankets (or as specified on the plan) prior to opening. If there are emergency spillways proposed, these shall contain adequate riprap to control intense channelized flows from runoff. Stabilize disturbed areas directly after earth disturbing activities, temporarily seed areas where active construction has not taken place for 15 working days. Permanently seed all areas that are at final grade, phase projects where each subsequent phase will not begin for 8 months or more, and areas to be idle for more than one year. See SWPPP Sheets for erosion control measures to be installed in concentrated flow areas, and for details as well as installation and maintenance procedures.
- B6 STORM WATER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS**  
SEE SWPPP Sheets for locations, types, and protection measures.
- B7 RUNOFF CONTROL MEASURES**  
Silt fence will be utilized to prevent sedimentation from leaving the boundaries of the site via runoff. See SWPPP sheets 12 and 13 for locations and details
- B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS**  
Storm Sewer outlets shall be installed as shown on SWPPP Sheet 14.
- B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS**  
NONE
- B10 LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS OF EACH STORM WATER QUALITY MEASURE**  
See SWPPP Sheets 12-14 of 16 and associated erosion control details.
- B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON**  
See SWPPP Sheets and "General Seeding & Surface Stabilizing Procedures".
- B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS**  
See SWPPP Sheets and "General Seeding & Surface Stabilizing Procedures".
- B13 MATERIAL HANDLING AND SPILL PREVENTION**  
Construction materials that may be located onsite include vehicle lubricants, oils, vehicular fuels, concrete wash-out, acids, curing compounds, paints, mulch, pesticides, herbicides, fertilizer, and trash. Any toxic waste materials are to be properly disposed of in an approved manner in accordance with local, state, and federal laws.  
These materials should be stored in a manner that prevents or minimizes the chance that a spill will reach soils, groundwater or surface water. Contractor shall have absorption spill clean-up materials and spill kits available in the storage areas at all times and utilize secondary containment by means of installing an impermeable berm around the construction site refueling and maintenance areas, and oil and chemical drums storage areas to prevent stormwater run-on, runoff, and to contain spills. Contractor shall select and designate an area onsite for these areas and utilize drip pans or absorbent pads during vehicle and equipment maintenance work. Contractor shall inspect these areas daily when in use, and weekly when not in use. Materials stored inside shall be placed in a manner to prevent a spill from migrating outside the confines of the building or into any drain leaving the building and discharging to soils, groundwater or surface water.  
If a spill does occur, then the spill must be contained immediately utilizing appropriate response techniques including diking and absorbents. Clean up of the spill should occur as soon as possible once the spill is stabilized and contained. Spills shall be cleaned up using acceptable methods such as, absorbents on impervious surfaces or removal of contaminated soils. In all cases cleanup standards must adhere to local, state and federal requirements. Failure to clean up any spill is a violation of the Indiana State Spill Rule (327 IAC 2-6.1), which is enforced by the Indiana Department of Environmental Management (IDEM). Certain spills must be reported to the local response agency, Local Emergency Planning Committee and/or IDEM. Initial calls should be made to the 911 system if the spill exceeds reportable quantities or is a threat to public safety. The 911 system will typically notify the City of South Bend Fire Department (574-235-9255). IDEM (1-888-233-7745) or the National Response Center (1-800-424-8802) can typically assist with information on clean up operations or clean up Contractors. The following information will likely need to be provided: time of spill, location of spill, material, source of spill, approximate volume and length of spillage, weather conditions at time of spill, personnel present at time of spill, and all action taken for post spill cleanup.  
Small spills and leaks of these materials onto non-paved areas shall be shoveled into containers or dumpsters and be properly disposed of in an approved manner in accordance with local and state laws.  
All spills that occur near an inlet to the stormwater conveyance system must have "curbing" implemented immediately. "Curbing" is the use of a barrier (absorbent material) which prevents the spill from making contact with the stormwater conveyance system or stormwater runoff.  
Contractor shall contact a Waste Recovery Agency immediately for removal of contaminants and coordination of monitoring the site during cleanup until all the hazardous material has been removed. Contractor shall cooperate with IDEM and the City of South Bend during and after the spill to insure all required cleanup and filing reports are properly submitted.  
The Developer/Owner shall be continually informed of any contamination concerns occurring on the site. The Construction Manager shall keep a list onsite of qualified Contractors for spill remediation. A spill prevention and control plan should be developed and utilized prior to any emergency. All site personnel, including maintenance employees, shall be made aware of this plan and proper spill prevention and remediation techniques. All materials used to absorb spills shall be properly disposed of in an approved manner in accordance with local and state laws. Do not flush spill materials with water unless directed to do so by a governing agency. It is important that all manufacturer's instructions be followed when using or applying all fertilizers, herbicides, and pesticides.
- B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED POLLUTION PREVENTION MEASURE**  
See SWPPP Details for maintenance requirements for each storm water quality measure. Contractor is responsible for establishing, monitoring, and maintaining all erosion control devices as required for this project. Contractor shall monitor devices for soil erosion on a weekly basis and/or within 24 hours of every 1/2 inch rainstorm event, and use the shown evaluation form for all site reviews. Any resulting problems shall be immediately reviewed and corrected at no additional cost to the owner.
- B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS**  
See SWPPP Sheet 13 for "Lot Erosion Control Protection Schematic".

### ADDITIONAL EROSION AND SEDIMENT CONTROL INFORMATION (WHERE APPLICABLE)

**Sediment Control Associated With Dewatering And Directional Boring Operation**  
Sediment laden water shall not be pumped to storm sewer outlets or natural drainage ways. Disposal shall be confined to areas not subject to sheet flow runoff where the effluent can be dried out. This restriction shall apply to areas where lime stabilization has been implemented. Maintenance and inspection are required for proper de-watering procedures.

## ASSESSMENT OF STORM WATER POLLUTION PREVENTION POST CONSTRUCTION COMPONENT (SECTION C)

- C1 DESCRIPTION OF POTENTIAL POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE**  
Potential pollutants generally associated with this proposed land use include trash, fertilizers, herbicides, pesticides, other lawn treatment applications, oils and liquids, fuels, and leaking vehicles.
- C2 SEQUENCE DESCRIBING STORM WATER QUALITY MEASURE IMPLEMENTATION**  
Following construction, all erosion control measures shall be inspected and maintained until all permanent measures and vegetation have been established and construction, including landscaping, is complete. Individual erosion control measures may be removed, following permanent inlet protection, seeding, and after sufficient vegetation has been established in an area to prevent silt and soil erosion into the storm sewer system.  
Inspection and maintenance of all common areas, landscape areas, and infrastructure improvements are the responsibility of the Developer/Owner and or local agencies taking jurisdiction of the installed infrastructure improvements.
- C3 DESCRIPTION OF PROPOSED POST CONSTRUCTION STORM WATER QUALITY MEASURES**  
Proposed post construction stormwater quality measures include establishing the proper vegetative ground cover for reducing sheet flow velocity and for aiding infiltration to control the transfer of pollutants from the project site. All disturbed areas shall be stabilized as specified in Chapter 7 - Surface Stabilization of the Indiana Storm Water Manual.
- C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORM WATER QUALITY MEASURE**  
See Sheet SWPPP Sheets for further information.  
This project includes the following storm water quality measures: Multiple Retention Areas, Storm Sewer Inlets, and Storm Sewer Pipe.
- C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR PROPOSED POST CONSTRUCTION STORM WATER QUALITY MEASURES**  
See "MAINTENANCE GUIDELINES" on this page of the SWPPP. Inspection of storm sewer inlets shall occur at regular annual intervals and after any rainfall event greater than 1 inch. In addition the storm sewer and drainage system including inlets, pipes, end sections, and retention areas shall be inspected and any sediment deposits, trash, or debris shall be removed as soon as possible. Storm sewer inlets shall be inspected for trash/debris and sediment. Any trash/debris stuck within the grate or inside the structure shall be removed and disposed of. Any accumulation of sediment within the storm structures shall be cleaned out with a vacuum truck. If it is observed that sediment has accumulated to an amount where it is beginning to be deposited into the storm sewer pipes connecting to the structures, the structures shall be vacuumed as soon as possible to prevent any further infiltration of sediment into the storm sewer pipes. In addition, grass areas shall be maintained on a regular mowing cycle. Trash and debris shall be removed from seeded, landscape, and paved areas as necessary. In addition, the retention basin shall be annually inspected for sediment accumulation. Sediment accumulation shall be removed as needed every 5-10 years. The basin sides shall be inspected biannually in the spring and fall and after a rainfall event of 1 inch or greater for signs of erosion. The owner is responsible for reestablishing permanent vegetation on all eroded slopes. The basin shall be mowed as needed and all dead vegetation shall be removed from all side slopes and basin bottom, so it will not prevent infiltration of storm water into the subsoil. In addition, it shall be noted that the developer assumes responsibility for operation and maintenance until St. Joseph County accepts the Development and that the County Drainage Board is responsible for the long term maintenance.

## EROSION AND SEDIMENT CONTROL SEQUENCE AND IMPLEMENTATION BY CONTRACTOR

- Contractor to schedule a Pre-Construction Meeting with the St Joseph County Public Works Department and St. Joseph County Soil and Water Conservation District (SWCD) prior to any land disturbance activities.
- Contractor shall notify IDEM, St Joseph County Public Works, and St. Joseph County SWCD at least 48 hours in advance of commencing with construction activities.
- Install temporary construction entrance(s) as shown.
- Install silt fencing as shown and protection devices around existing storm inlets with open grades.
- Dust shall be kept to a minimum by utilizing water sprinkling, calcium chloride, vegetative cover, spray on adhesives, or other approved methods.
- Identify Contractor staging, concrete washout areas, material storage, and topsoil stockpile areas. Each area shall be properly protected and delineated prior to construction.
- The "Rule 5" Notice of Intent (NOI), SWPPP, and who to contact regarding the SWPPP shall be posted at the job site.
- Contact Indiana Underground Plant Protection Systems, Inc. (INDIANA 811) for underground utility locations. (1-800-382-5544).
- Strip and stockpile any existing topsoil onsite at a location determined by the Developer/Owner.
- Begin earthwork operations for the project and refer to the SWPPP drawings for "General Seeding and Surface Stabilization Procedures" for temporary seeding guidelines. Install erosion control blankets and rock as specified on the drawings on the SWPPP drawings.
- Install dewatering measures as necessary for the proposed construction in accordance with all governing agencies regulations and requirements.
- Repair any silt fencing if damaged. If silt is 1/3 height of fabric, remove silt and replace/repair fencing as necessary.
- The installation of the basins in relation to land disturbance activities is determined by the Contractor and may vary depending on site conditions and shall be in accordance of all governing agencies. See SWPPP sheets 11 and 12 for "Slope Stabilization" control location and details. In addition, inspection shall occur at least once a week and following each 1/2" rain event or more. Silt shall be removed from the bottom of the basins to ensure proper drainage.
- Begin construction of utility infrastructure and install inlet protection around new storm inlets.
- Begin construction of building, pavements, sidewalks, and final grading of yard areas.
- Immediately after final grading, apply surface stabilization practices on all graded areas, using permanent measures in accordance with the SWPPP drawings for "General Seeding and Surface Stabilization Procedures". However, if weather delays permanent stabilization, temporary seeding and/or mulching may be necessary as a provisional measure. Also stabilize using temporary seeding/mulching or other suitable means any disturbed area where active construction will or has not taken place for 15 working days.
- After construction and final grading are completed, install landscaping, and apply permanent stabilization techniques on all disturbed areas. Also remove temporary runoff control structures and any unstable sediment around them, and stabilize those areas with permanent seeding and erosion control blankets as necessary.
- Maintain all erosion control devices until all disturbed areas are permanently stabilized.
- Notice of Termination (NOT) of "Rule 5" Notice of Intent shall be submitted to St Joseph County when construction is completed for the project. The City will then process the Notice of Termination and forward to IDEM.

**ABONMARCHÉ**  
Professional Engineer  
1315 W. Jefferson Blvd.  
South Bend, IN 46701  
T 574.232.8700  
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Professional Engineer License No. 19400322  
STATE OF INDIANA

### INVERNESS WOODS PHASE TWO

### STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PROJECT: INVERNESS WOODS PHASE TWO  
SHEET TITLE: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SCALE: 1"=40'  
SIGNATURE: [Signature]  
DATE: 06-29-2021  
SCALE: 1"=40'  
HORIZ: [Symbol]  
VERT: [Symbol]  
ACT JOB #: 21-0242  
SHEET NO: 15 of 17





**WETLANDS MAP**  
(NOT TO SCALE)

WETLANDS INFORMATION IS DEFINED AND SCALED FROM THE IDEM NATION WETLAND INVENTORY MAPS.

**LEGEND**

- ① Freshwater Emergent Wetland
- ② Freshwater Pond



**SOILS MAP**  
(NOT TO SCALE)

**SOILS CLASSIFICATION**

SOILS INFORMATION IS DEFINED AND SCALED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION DISTRICT'S WEB SOIL SURVEY.

**TmpA** – Tracy sandy loam, 0 to 1 Percent Slopes

Soil is well drained having a depth to the water table of more than 80 inches and a loamy over sandy outwash parent material. The capacity of the most limiting layer to transmit water is moderately high to high (0.60 to 2.00 in/hr).

Soil Typical Profile

0 to 9 inches: sandy loam  
9 to 47 inches: sandy loam  
47 to 60 inches: gravelly sandy clay loam  
60 to 86 inches: stratified loamy sand to gravelly sand

**TmpB** – Tracey sandy loam, 1 to 5 Percent Slopes

Soil is well drained having a depth to the water table of more than 80 inches and a loamy over sandy outwash parent material. The capacity of the most limiting layer to transmit water is moderately high to high (0.60 to 2.00 in/hr).

Soil Typical Profile

0 to 9 inches: sandy loam  
9 to 17 inches: sandy loam  
17 to 60 inches: gravelly sandy clay loam  
60 to 86 inches: stratified loamy sand to gravelly sand

**TmpC2** – Tracey sandy loam, 5 to 10 Percent Slopes, eroded

Soil is well drained having a depth to the water table of more than 80 inches and a loamy over sandy outwash parent material. The capacity of the most limiting layer to transmit water is moderately high to high (0.60 to 2.00 in/hr).

Soil Typical Profile

0 to 9 inches: sandy loam  
9 to 17 inches: sandy loam  
17 to 60 inches: gravelly sandy clay loam  
60 to 86 inches: stratified loamy sand to gravelly sand

**INVERNESS WOODS  
PHASE TWO**

**STORM WATER POLLUTION  
PREVENTION PLAN (SWPPP)**

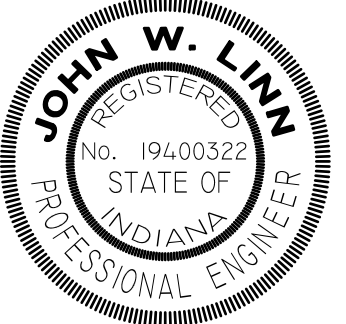
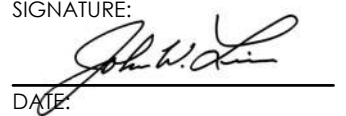
PROJECT: INVERNESS WOODS PHASE TWO  
SHEET TITLE: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)  
DRAWN BY: ZDH  
DESIGNED BY: ZDH  
PM REVIEW: RAN  
QA/QC REVIEW:  
DATE: 06-29-2021  
SEAL:   
SIGNATURE:   
DATE: 06-29-2021  
SCALE:  
HORZ:  
VERT:  
ACI JOB #: 21-0242  
SHEET NO.: 17 of 17

EXHIBIT B

ENGINEER'S ESTIMATE

## Inverness Woods - Phase 2

### City of South Bend Sanitary Sewer Construction Cost Estimate

September 15, 2021

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Cost</i>
1 Mobilization/Demobilization	1	LS	5.0%	\$8,240.95
2 Testing	1	LS	\$ 2,500.00	\$2,500.00
3 Sanitary Sewer, 8" PVC, SDR 35	1,445	lft	\$ 55.00	\$79,475.00
4 Standard Sanitary Manholes	7	EA	\$ 3,000.00	\$21,000.00
5 Sanitary Laterals, 6"	33	EA	\$ 1,500.00	\$49,500.00
Subtotal			<b>TOTAL:</b>	<b>\$160,715.95</b>
As-Builts	1	LS	\$5,000.00	\$5,000.00
			<b>TOTAL:</b>	<b>\$165,715.95</b>

EXHIBIT C

PERFORMANCE BOND



SUBDIVISION BOND

Bond No.: LICX1210686

Principal Amount: \$207,144.94

KNOW ALL MEN BY THESE PRESENTS, that we

Westview Capital, LLC  
2186 E. Centre Street, Portage, MI 49002

as Principal, and

Lexon Insurance Company  
12890 Lebanon Road, Mt. Juliet, TN 37122 a TX

Corporation, as Surety, are held and firmly bound unto

City of South Bend - Board of Public Works  
227 W. Jefferson Blvd., Room 1316, South Bend, IN 46601

as Obligee, in the penal sum of

Two Hundred Seven Thousand One Hundred Forty Four Dollars and 94/100

(Dollars) (\$ 207,144.94 ), lawful money of the United States of America, for the payment of which well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Westview Capital, LLC has agreed to construct in Inverness Woods Phase 2 Subdivision, in South Bend, IN the following improvements:

Sanitary Sewer Construction and Testing

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall construct, or have constructed, the improvements herein described, and shall save the Obligee harmless from any loss, cost or damage by reason of its failure to complete said work, then this obligation shall be null and void, otherwise to remain in full force and effect, and the Surety, upon receipt of a resolution of the Obligee indicating that the improvements have not been installed or completed, will complete the improvements or pay to the Obligee such amount up to the Principal amount of this bond which will allow the Obligee to complete the improvements.

Upon approval by the Obligee, this instrument may be proportionately reduced as the public improvements are completed.

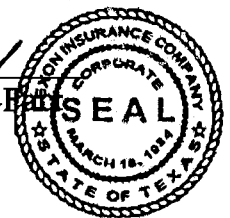
Signed, sealed and dated, this 16th day of September, 2021

Westview Capital, LLC  
Principal

By: [Signature]

Lexon Insurance Company  
Surety

By: James I. Moore  
James I. Moore Attorney-in-Fact





# SOMPO INTERNATIONAL

INSURANCE

# POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that **Endurance Assurance Corporation**, a Delaware corporation, **Endurance American Insurance Company**, a Delaware corporation, **Lexon Insurance Company**, a Texas corporation, and/or **Bond Safeguard Insurance Company**, a South Dakota corporation, each, a "Company" and collectively, "**Sompo International**," do hereby constitute and appoint: **James I. Moore**

as true and lawful Attorney(s)-In-Fact to make, execute, seal, and deliver for, and on its behalf as surety or co-surety; bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking so made, executed and delivered shall obligate the Company for any portion of the penal sum thereof in excess of the sum of Twenty Million Dollars (\$20,000,000.00).

Surety Bond No.: LICX1210686

Principal: Westview Capital, LLC

Obligee: City of South Bend - Board of Public Works

Such bonds and undertakings for said purposes, when duly executed by said attorney(s)-in-fact, shall be binding upon the Company as fully and to the same extent as if signed by the President of the Company under its corporate seal attested by its Corporate Secretary.

This appointment is made under and by authority of certain resolutions adopted by the sole shareholder of each Company by unanimous written consent effective the 15<sup>th</sup> day of June, 2019, a copy of which appears below under the heading entitled "Certificate".

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the sole shareholder of each Company by unanimous written consent effective the 15<sup>th</sup> day of June, 2019 and said resolution has not since been revoked, amended or repealed:

RESOLVED, that the signature of an individual named above and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature or seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, each Company has caused this instrument to be signed by the following officers, and its corporate seal to be affixed this 15<sup>th</sup> day of June, 2019.

Endurance Assurance Corporation

By: *Richard M. Appel*  
Richard Appel; SVP & Senior Counsel



Endurance American Insurance Company

By: *Richard M. Appel*  
Richard Appel; SVP & Senior Counsel



Lexon Insurance Company

By: *Richard M. Appel*  
Richard Appel; SVP & Senior Counsel



Bond Safeguard Insurance Company

By: *Richard M. Appel*  
Richard Appel; SVP & Senior Counsel



### ACKNOWLEDGEMENT

On this 15<sup>th</sup> day of June, 2019, before me, personally came the above signatories known to me, who being duly sworn, did depose and say that he/they are an officer of each of the Companies; and that he executed said instrument on behalf of each Company by authority of his office under the by-laws of each Company.

By: *Amy Taylor*  
Amy Taylor, Notary Public - My Commission Expires 5/9/23



### CERTIFICATE

I, the undersigned Officer of each Company, DO HEREBY CERTIFY that:

1. That the original power of attorney of which the foregoing is a copy was duly executed on behalf of each Company and has not since been revoked, amended or modified; that the undersigned has compared the foregoing copy thereof with the original power of attorney, and that the same is a true and correct copy of the original power of attorney and of the whole thereof;
2. The following are resolutions which were adopted by the sole shareholder of each Company by unanimous written consent effective June 15, 2019 and said resolutions have not since been revoked, amended or modified:

"RESOLVED, that each of the individuals named below is authorized to make, execute, seal and deliver for and on behalf of the Company any and all bonds, undertakings or obligations in surety or co-surety with others: RICHARD M. APPEL, BRIAN J. BEGGS, CHRISTOPHER DONELAN, SHARON L. SIMS, CHRISTOPHER L. SPARRO, MARIANNE L. WILBERT ; and be it further

RESOLVED, that each of the individuals named above is authorized to appoint attorneys-in-fact for the purpose of making, executing, sealing and delivering bonds, undertakings or obligations in surety or co-surety for and on behalf of the Company."

3. The undersigned further certifies that the above resolutions are true and correct copies of the resolutions as so recorded and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal this 16th day of September, 2021.

By: *Daniel S. Lurie*  
Daniel S. Lurie, Secretary

### NOTICE: U. S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL (OFAC)

No coverage is provided by this Notice nor can it be construed to replace any provisions of any surety bond or other surety coverage provided. This Notice provides information concerning possible impact on your surety coverage due to directives issued by OFAC. Please read this Notice carefully.

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous foreign agents, front organizations, terrorists, terrorist organizations, and narcotics traffickers as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's website - <https://www.treasury.gov/resource-center/sanctions/SDN-List>.

In accordance with OFAC regulations, if it is determined that you or any other person or entity claiming the benefits of any coverage has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, any coverage will be considered a blocked or frozen contract and all provisions of any coverage provided are immediately subject to OFAC. When a surety bond or other form of surety coverage is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments may also apply.

Any reproductions are void.

Surety Claims Submission: [LexonClaimAdministration@sompo-intl.com](mailto:LexonClaimAdministration@sompo-intl.com)

Telephone: 615-553-9500 Mailing Address: Sompo International; 12890 Lebanon Road; Mount Juliet, TN 37122-2870

State of Illinois}
} ss.
County of DuPage }

On September 16, 2021, before me, Diane M. Rubright, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared, James I. Moore, known to me to be Attorney-in-Fact of Lexon Insurance Company, the corporation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation, and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.

My Commission Expires March 23, 2023

Diane M. Rubright

Diane M. Rubright, Notary Public

Commission No. 817036



EXHIBIT D

SYSTEM DEVELOPMENT CHARGE

## Estimate for System Development Charges

Estimate Provided On: 8/18/2021

Estimate Provided By: C. Brach

### Inverness Woods South Bend, IN

**\*\*Estimate is based on projected uses and calculations provided by owner/consultant\*\***

	Values	Unit Type
Single Family Homes # of Unit Types	33	houses
Estimated Flow (gpd) for Single Family Homes	310	per house
Estimated Total Flow for Single Family Homes	10230	gpd
Estimated Total Flow for Inverness Woods	10230	gpd
ERU calculation	33.000	ERU
ERU rounddown	33	ERU
Sewer SDC Calculation (\$1145 per ERU)	\$	37,785.00
<b>Estimated Amount Due for Inverness Woods</b>	<b>\$</b>	<b>37,785.00</b>
<b>Estimated 10% Discounted Total (Payment in full)</b>	<b>\$</b>	<b>34,006.50</b>

**Per the Ordinance of the Common Council of the City of South Bend, System Development Charges are summarized below from Sections 17-79 and 17-80:**

**Sec. 17-79. - System Development Charge for Wastewater inside and outside City limits.**

(1) For purposes of this section "ERU" shall be defined as an equivalent residential unit which means a single family residence. For purposes of customers that are not single family residences, one (1) ERU shall equal estimated wastewater flows of three hundred ten (310) gallons per day. No customer will be less than one (1) ERU. There will be no partial ERU's. The City shall round down to the closest applicable ERU calculation at all times.

(2) Except as provided in Subsections (5) and (6) of this section, for every new connection to the South Bend Municipal Sewer Works, a system development charge of one thousand one hundred forty-five dollars (\$1,145.00) shall be collected per ERU and additional portion thereof to be connected. All charges shall be billed by the City at the time the application for service is filed.

(3) System development charges per ERU shall also be collected from existing customers undertaking activities producing a permanent increase in wastewater flow of greater than three hundred ten (310) gallons per day. This subsection shall not apply to an existing customer who has, by contract, purchased reserved capacity from the City so long as the customer's flows remain within the reserved capacity. A permanent increase shall be deemed to have occurred when the average flow rate for six (6) consecutive months exceeds the current flow rate by at least three hundred ten (310) gallons per day.

(4) For multifamily structures (e.g., apartments, condominiums, mobile home communities), each individual unit shall be one (1) ERU. For all other types of structures, the ERU calculation shall be based upon the ratio of Average Daily Flow as computed pursuant to 327 IAC 3-6-11 in relationship to three hundred ten (310) gallons per day. For structures not listed in 327 IAC 3-6-11, the ERU shall be calculated as the relationship between the Average Daily Flow reported in the sewer capacity certification for the structure and three hundred then (310) gallons per day.

(5) For customers with greater than twenty (20) ERUs as calculated pursuant to subsection (4) of this section, the ERU shall be adjusted based upon the Peaking Factor as computed herein. The Peaking Factor shall be calculated by dividing the Peak Daily Flow by the Average Daily Flow, both as reported in the sewer capacity certification. In no event will a Peaking Factor less than 2.0 be used for purposes of the adjustment described in this subsection. The Peaking Factor divided by 4.0 (the Peaking Factor for residential connections) will be multiplied by the number of ERUs for purposes of computing the system development charge owed by the customer. The City Board of Works may execute a contract with the customer authorizing an increase to the initial System Development Charge based upon actual usage data that is collected after connection.

(6) Where a prospective customer seeks to connect a new structure on property which replaces a prior structure of a similar use what was located on the same property and which was connected to the South Bend Municipal Sewer Works, no system development charge will be collected. For instance, if the prior structure was a single family structure and the new structure is to be used as a multi-family structure, a system development charge, as contemplated herein this section, shall be charged. The Board of Public Works shall make the final determination of whether the new property structure is a similar use to the prior property structure for the purposes of this subsection.

**Sec. 17-80. - System Development Charge for Water inside and outside City limits.**

(1) For purposes of this section "ERU" shall be defined as an equivalent residential unit which means a single family residence. For purposes of customers that are not single family residences, one (1) ERU shall equal estimated water flows of three hundred ten (310) gallons per day. No customer will be less than one (1) ERU. There will be no partial ERU's. The City shall round down to the closest applicable ERU calculation at all times.

(2) Except as provided in Subsections (5) and (6) of this section, for every new connection to the South Bend Municipal Water Works, a system development charge of five hundred dollars (\$500.00) shall be collected per ERU and additional portion thereof to be connected. All charges shall be billed by the City at the time the application for service is filed.

(3) System development charges per ERU shall also be collected from existing customers undertaking activities producing a permanent increase in water flow of greater than three hundred ten (310) gallons per day. This subsection shall not apply to an existing customer who has, by contract, purchased reserved capacity from the City so long as the customer's flows remain within the reserved capacity. A permanent increase shall be deemed to have occurred when the average flow rate for six (6) consecutive months exceeds the current flow rate by at least three hundred ten (310) gallons per day.

(4) For multifamily structures (e.g., apartments, condominiums, mobile home communities), each individual unit shall be one (1) ERU. For all other types of structures, the ERU calculation shall be based upon the ratio of Average Daily Flow as computed pursuant to 327 IAC 3-6-11 in relationship to three hundred ten (310) gallons per day. For structures not listed in 327 IAC 3-6-11, the ERU shall be calculated as the relationship between the Average Daily Flow reported in the water capacity certification for the structure and three hundred ten (310) gallons per day.

(5) For customers with greater than twenty (20) ERUs as calculated pursuant to subsection (4) of this section, the ERU shall be adjusted based upon the Peaking Factor as computed herein. The Peaking Factor shall be calculated by dividing the Peak Daily Flow by the Average Daily Flow, both as reported in the water capacity certification. In no event will a Peaking Factor less than 2.0 be used for purposes of the adjustment described in this subsection. The Peaking Factor divided by 4.0 (the Peaking Factor for residential connections) will be multiplied by the number of ERUs for purposes of computing the system development charge owed by the customer. The City Board of Works may execute a contract with the customer authorizing an increase to the initial System Development Charge based upon actual usage data that is collected after connection.

(6) Where a prospective customer seeks to connect a new structure on property which replaces a prior structure of a similar use what was located on the same property and which was connected to the South Bend Municipal Water Works, no system development charge will be collected. For instance, if the prior structure was a single family structure and the new structure is to be used as a multi-family structure, a system development charge, as contemplated herein this section, shall be charged. The Board of Public Works shall make the final determination of whether the new property structure is a similar use to the prior property structure for the purposes of this subsection.

**Sec. 17-85. - Methods of payment; prepayment with discount; installment plan.**

(a) The property owner may pay all charges in full prior to time the installation work is commenced. Prepayment of expenses in advance under this section shall entitle the owner to a ten (10) percent *discount* of the total charge.

The Huntington National Bank  
Grand Rapids, MI

TAC (TM) AP 1005E90-94297-42BC-G4 9/16/2021 11:41:05 30972 34006.50  
74-347724

30972

**Westview Capital, LLC**  
2186 E. Centre Ave  
Portage, MI 49002  
(269) 321-2600

DATE 09/16/2021

Pay: \*\*\*\*\*Thirty-four thousand six dollars and 50 cents

\$ \*\*\*\*\*34,006.50

TO  
THE  
ORDER  
OF

City of South Bend  
Public Works  
227 W. Jefferson Blvd Suite 1300N  
South Bend, IN 46601

*[Signature]*  
*[Signature]*

⑈000030972⑈ ⑆072403473⑆ 01153527565⑈

**Westview Capital, LLC**

City of South Bend

DATE	INVOICE NO	DESCRIPTION	INVOICE AMOUNT	DEDUCTION	BALANCE
9-16-21	IVW2 Sewer	IVW2 Sewer Connect	34006.50		34006.50
CHECK DATE	9-16-21	CHECK NUMBER	30972	TOTAL >	34006.50

PLEASE DETACH AND RETAIN FOR YOUR RECORDS

**BOARD OF PUBLIC WORKS  
AGENDA ITEM REVIEW REQUEST FORM**

Date	<u>9/22/2021</u>	Department	<u>Engineering</u>
Name	<u>Kyle Silveus</u>	Phone Extension	
BPW Date	<u>9/28/2021</u>	Phone Extension	-

**Review and Approval Required Prior to Submittal to Board**

Diversity Compliance and Inclusion Officer	<input type="checkbox"/>	Officer Name	_____
BPW Attorney	<input type="checkbox"/>	Attorney Name	<u>Clara McDaniels</u>
Dept. Attorney	<input type="checkbox"/>	Attorney Name	_____
Purchasing	<input type="checkbox"/>	_____	

**Check the Appropriate Item Type – Required for All Submissions**

<input type="checkbox"/> Professional Services Agreement	<input type="checkbox"/> Contract	<input type="checkbox"/> Proposal	
<input type="checkbox"/> Open Market Contract	<input type="checkbox"/> Amendment/Addendum	<input type="checkbox"/> Special Purchase, QPA	
<input type="checkbox"/> Bid Opening	<input type="checkbox"/> Bid Award	<input type="checkbox"/> Req. to Advertise	<input checked="" type="checkbox"/> Title Sheet
<input type="checkbox"/> Quote Opening	<input type="checkbox"/> Quote Award	<input type="checkbox"/> Reject Bids/Quotes	
<input type="checkbox"/> Proposal Opening	<input type="checkbox"/> C/O & PCA No. _____	<input type="checkbox"/> Resolution	
<input type="checkbox"/> Chg. Order, No. _____	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Ease./Encroach	
<input checked="" type="checkbox"/> Other: Sanitary <u>Sewer Extension Agreement</u>		<input type="checkbox"/> Ease./Encroach	

**Required Information**

Company or Vendor Name	<u>Westview Capital, LLC.</u>
New Vendor	<input type="checkbox"/> Yes <input type="checkbox"/> If Yes, Approved by Purchasing <input type="checkbox"/> No
MBE/WBE Contractor	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <u>Completed E-Verify Form Attached</u> <input type="checkbox"/> Yes <input type="checkbox"/> No
Project Name	<u>Inverness Woods Sewer Extension Agreement</u>
Project Number	<u>DP21-011</u>
Funding Source	<u>N/A</u>
Account No.	<u>N/A</u>
Amount	<u>N/A</u>
Terms of Contract	<u>N/A</u>
Purpose/Description	<u>Sanitary Sewer Extension Agreement. This extension is within the serviceable area outlined in the Sewer and Water Extension Policy for areas outside of the City Limits.</u>

**For Change Orders Only**

Amount of	<input type="checkbox"/> Increase \$ _____ <input type="checkbox"/> Decrease (\$ _____)
Previous Amount	\$ _____
Current Percent of Change:	Increase _____ % Decrease ( _____ %)
New Amount	\$ _____
Total Percent of Change:	Increase _____ % Decrease ( _____ %)
Time Extension Amount:	_____