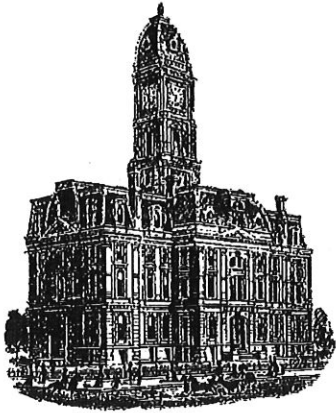


KLW



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

September 23, 2020

Re: Long Branch Drain –Sanctuary at 116th Street Sec. 2B Arm

Attached are as-builts and other information for Sanctuary at 116th Street Sec 2B Arm. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated November 30, 2007. The report was approved by the Board at the hearing held January 28, 2008. (See Drainage Board Minutes Book 11, Pages 20-21) The changes are as follows: the 12" RCP was shortened from 588 feet to 102 feet. The 15" RCP was not installed. The 18" RCP was shortened from 189 feet to 54 feet. The 21" RCP was not installed. The 24" RCP was shortened from 619 feet to 321 feet. The 30" RCP was shortened from 836 feet to 612 feet. Added to this section was a run of 220 feet of 36" RCP and 115 feet of 42" RCP. The 6" SSD was shortened from 5656 feet to 2588 feet. The length of the drain due to the changes described above is now **4012** feet.

The non-enforcement was approved by the Board at its meeting on August 28, 2017 and recorded under instrument #2018053339.

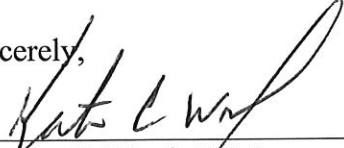
The following sureties were guaranteed by Bond Safeguard Insurance Company and released by the Board on its August 10, 2009 meeting.

Bond-LC No: 5029930
Amount: \$167,760.00
For: Storm Sewers
Issue Date: September 4, 2007

Bond-LC No: 5029329
Amount: \$50,977.20
For: SSD
Issue Date: September 4, 2007

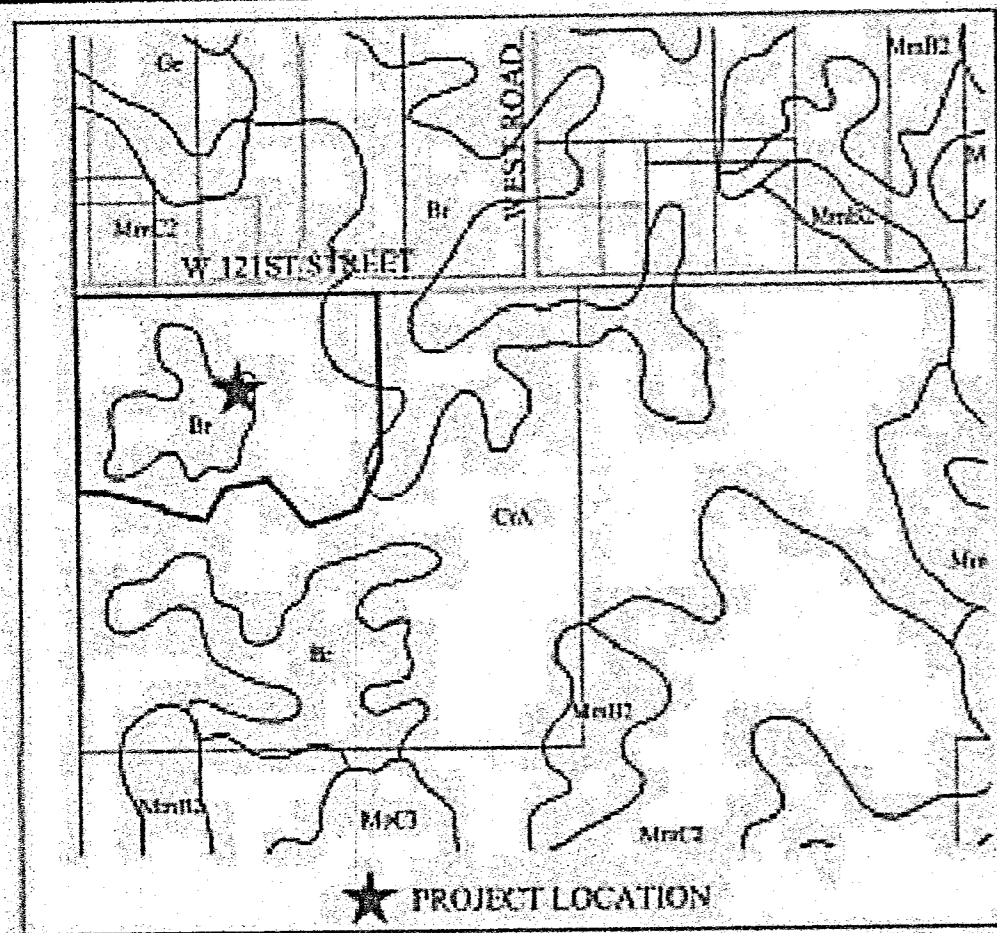
I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

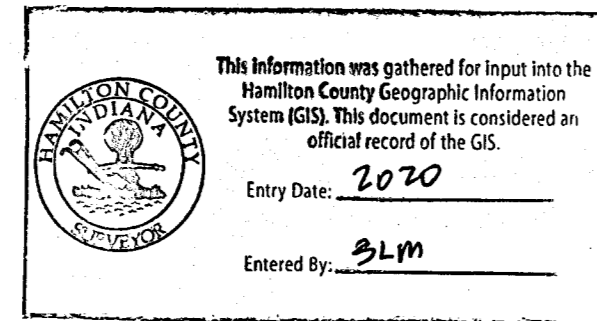


Kenton C. Ward, CFM
Hamilton County Surveyor

CONSTRUCTION PLANS RECORD DRAWING FOR SANCTUARY AT 116TH STREET SECTION TWO B CITY OF CARMEL 4455 W. 121st STREET HAMILTON COUNTY, INDIANA SECTION 31, TOWN 18, RANGE 3



SOILS MAP



OPERATING AUTHORITIES

CITY OF CARMEL ONE CIVIC SQUARE CARMEL, IN 46032 ASSISTANT PLANNER: ANGIE CONN 317-571-2417 DEPT. OF ENGINEERING: JEREMY KASHMAN 317-571-2441	HAMILTON COUNTY SURVEYOR'S OFFICE ONE HAMILTON SQUARE, SUITE 188 HAMILTON COUNTY JUDICIAL CENTER NOBLESVILLE, INDIANA 46060 GREG HOYES 317-776-8495	CARMEL CITY UTILITIES 760 3RD AVENUE S.W. CARMEL, INDIANA 46032 JOHN DUFFY 317-571-2443
CITY OF CARMEL FIRE DEPARTMENT TWO CIVIC SQUARE CARMEL, INDIANA 46032 CHRIS ELLISON 317-571-2600	BRIGHTHOUSE NETWORKS 3030 ROOSEVELT AVE. INDIANAPOLIS, IN 46218 JASON KIRKMAN 317-632-9077 EXT.291	VECTREN ENERGY P.O. BOX 1700 NOBLESVILLE, IN 46061-1700 JOANIE CLARK 317-776-5532
CLAY TOWNSHIP REGIONAL WASTE DISTRICT 10701 N. COLLEGE AVENUE, SUITE A INDIANAPOLIS, IN 46280-1098 RYAN HARTMAN 317-844-9200	DUKE ENERGY 16475 SOUTHPARK DRIVE WESTFIELD, INDIANA 46074 SHIRELY HUNTER 317-896-6711	

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY AND COORDINATE CONSTRUCTION WITH ALL RESPECTIVE UTILITIES.
- ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
- IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.
- TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.
- THE ENGINEER AND/OR OWNER DOES NOT CLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- ANY FIELD TILES ENCOUNTERED DURING EXCAVATION SHALL BE REPAIRED AND CONNECTED TO NEW STORM SEWERS AND POSITIVE DRAINAGE PRESERVED.
- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER THAT ALL LANDSCAPE REQUIREMENTS ARE MET AND CONFORM TO APPLICABLE LOCAL STANDARDS.
- THE SITE DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18057C0205F, DATED FEBRUARY 19, 2003. THEREFORE THERE ARE NO 100 YR. FLOODPLAINS, FLOODWAY FRINGES, OR FLOODWAYS ON THIS SITE.
- BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS & PLAT FOR EXACT INFORMATION.
- THIS SITE DOES NOT CONTAIN ANY WETLANDS AS SHOWN ON THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE, CARMEL, INDIANA, NATIONAL WETLANDS INVENTORY MAP DATED 1990.
- DAMAGE TO THE EXISTING RIGHT-OF-WAY SHALL BE RESTORED/REPAIRED TO THE SATISFACTION OF THE CITY AT THE COMPLETION OF THE PROJECT. THE CONTRACTOR IS ENCOURAGED TO INSPECT THE RIGHT-OF-WAY WITH THE CITY PRIOR TO THE START OF CONSTRUCTION TO DOCUMENT THE EXISTING CONDITION OF THE RIGHT-OF-WAY.
- NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

LEGAL DESCRIPTION

RECORD DRAWING
12-20-2018

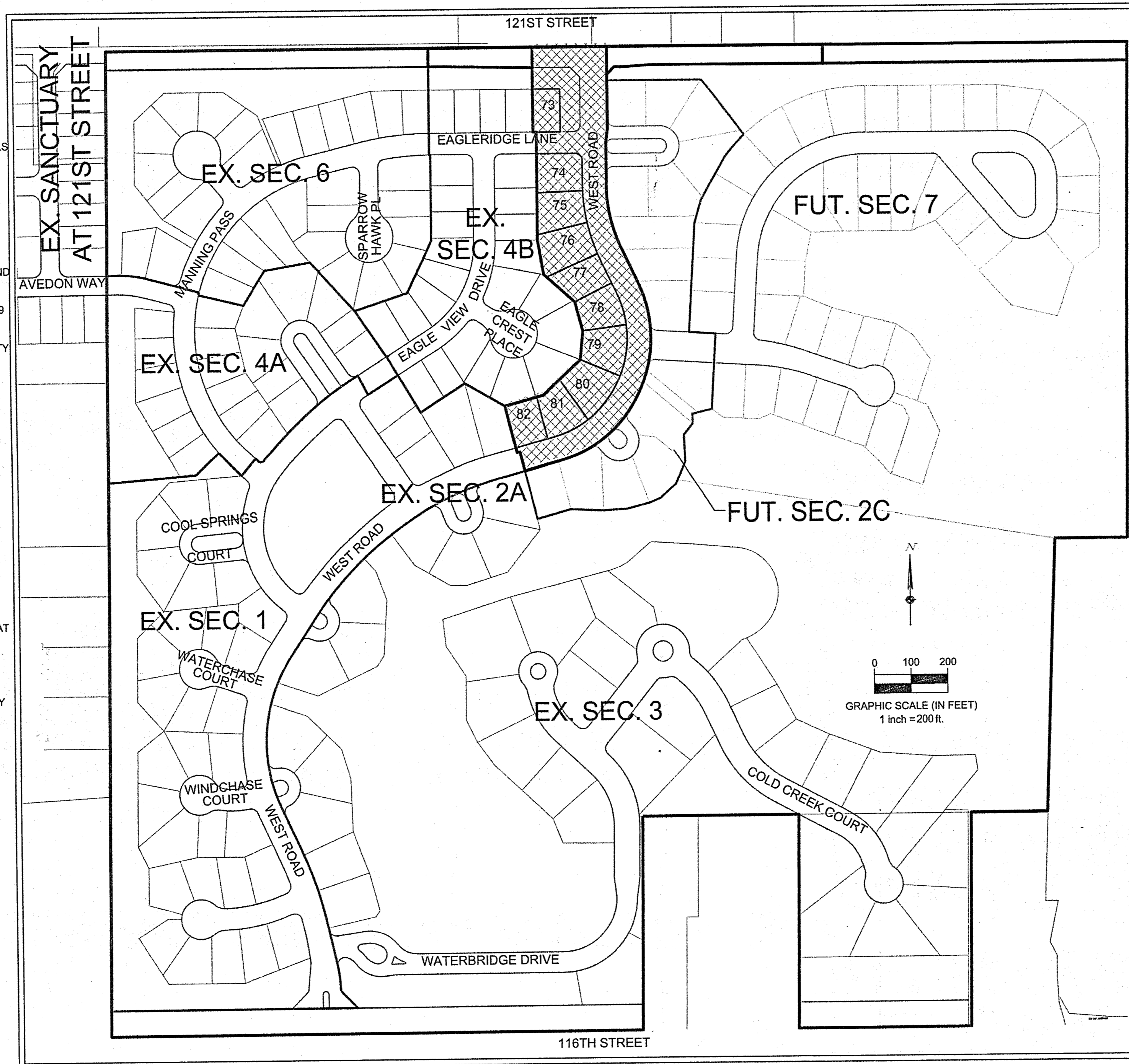
JE T
JOSEPH TRTAN, LS21500003



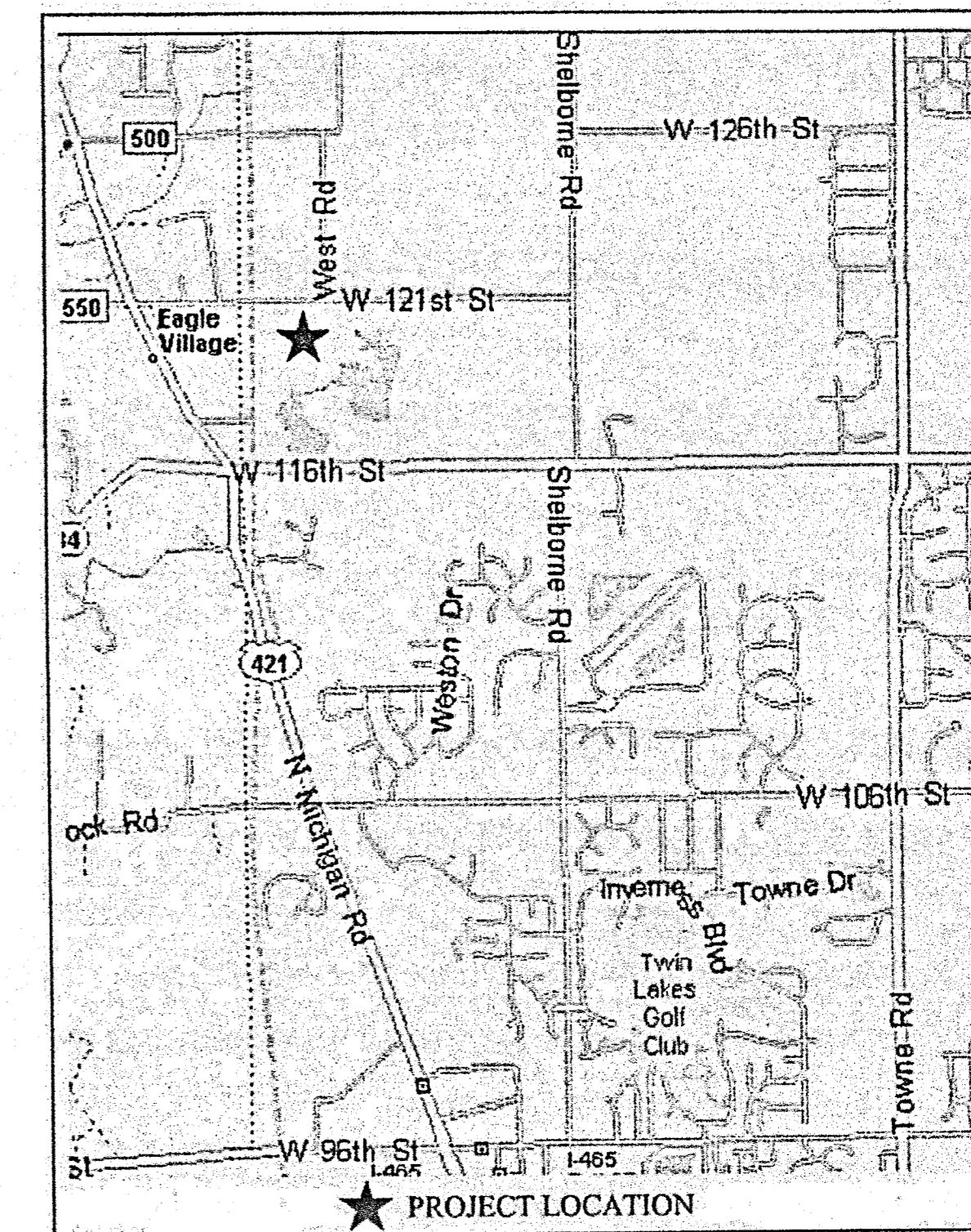
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

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

PROJECT NO. W170381



SITE MAP



VICINITY MAP

INDEX OF SHEETS

TITLE SHEET	1
STORMWATER POLLUTION PREVENTION PLAN	2-3
STORMWATER POLLUTION PREVENTION NOTES & DETAILS	4-6
OVERALL DEVELOPMENT PLAN	7
GRADING PLAN	8
EMERGENCY OVERFLOW PLAN	9
STREET PLAN AND PROFILE	10-11
STREET DETAILS	12
STREET SPECIFICATIONS	13
TRAFFIC CONTROL PLAN & INTERSECTION DETAILS	14-14A
121ST ST. WIDENING PLAN	15
121ST ST. MAINTENANCE OF TRAFFIC PLAN	16
SANITARY PLAN AND PROFILE	17
SANITARY SEWER DETAILS	18-19
SANITARY SEWER SPECIFICATIONS	20
STORM SEWER PLAN AND PROFILE	21
STORM SEWER DETAILS	22-23
WATER MAIN PLAN	24
WATER MAIN DETAILS & SPECIFICATIONS	25
PROPERTY SURVEY	26-27

DESIGN DATA

TOTAL ACREAGE: 5.80 AC
DISTURBED AREA: 7.08
NUMBER OF LOTS: 10
DENSITY: 1.39 LOTS/AC

STREET LENGTH:
WEST ROAD: 1,300 LF
EAGLE RIDGE LANE: 167 LF
PRAIRIE FALCON DRIVE: 33 LF

TOTAL LENGTH: 1,490
SPEED LIMIT: 25 MPG

ZONING AND SETBACK

BUILDING SETBACK LINE REQUIREMENTS PER ZONING
ZONING: S-1/RESIDENCE-ROSO III WITH WAIVERS
FRONT YARD:
1. DWELLING WITH ATTACHED FRONT LOADING GARAGE: TWENTY (20) FEET FOR DWELLING; TWENTY-FIVE (25) FEET FOR GARAGE (UNLESS OTHERWISE NOTED ON PLAT)
2. DWELLING WITH ATTACHED, SIDE-LOADING GARAGE: FIFTEEN (15) FEET FOR DWELLING; TWENTY-FIVE (25) FEET FOR GARAGE (UNLESS OTHERWISE NOTED ON PLAT)
3. DWELLING WITH ATTACHED, REAR-LOADING, OR DETACHED, ALLEY ACCESS GARAGE: TEN (10) FEET FOR DWELLING. (UNLESS OTHERWISE NOTED ON PLAT)

SIDE YARD: ZERO (0) FEET*
REAR YARD: ZERO (0) FEET*

MINIMUM BUILDING SEPARATION: SIX (6) FEET*

NOTE: SIDE/REAR SETBACKS AND MINIMUM BUILDING SEPARATION SHALL BE INCREASED BY ONE (1) FOOT FOR EACH ADDITIONAL (1) FOOT A STRUCTURE IS RAISED ABOVE THE TWENTY-FIVE (25) FOOT HEIGHT STANDARD-WITH NO STRUCTURE EXCEEDING THIRTY-FIVE (35) FEET IN HEIGHT.

BENCHMARK INFORMATION

BM BOO 54 - A DNR DISK IS LOCATED 1.0 MILE NORTHEAST OF ZIONSVILLE; 0.2 MILES EAST ALONG WEST 121ST STREET FROM ITS JUNCTION WITH STATE ROAD 421, AT THE INTERSECTION OF DAUGHERTY DRIVE AND WEST 121ST STREET, IN THE NORTHEAST 1/4 OF THE INTERSECTION, AT THE ENTRANCE TO THE EAGLE VILLAGE SUBDIVISION; SET IN THE TOP OF A CONCRETE POST, LEVEL WITH THE GROUND; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED "BOO 54 1989". ELEV.: 900.76 FEET (1988 DATUM)

HORIZONTAL DATUM: NAD 83 INDIANA STATE PLANE COORDINATE SYSTEM, EAST ZONE

OWNER/DEVELOPER

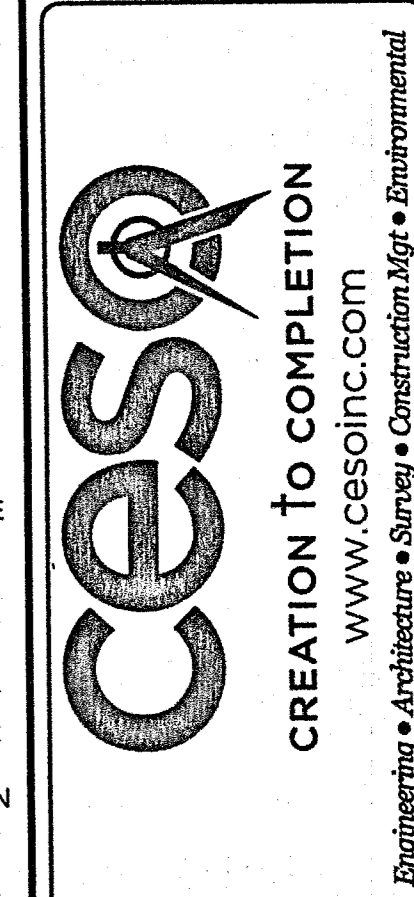
SANCTUARY PROJECT 1, LLC
8534 YANKEE STREET
DAYTON, OH 45458
PH: (937) 435-8584
EMAIL: OAKES@CESOINC.COM
CONTACT: DAVID C. OAKES

ENGINEER

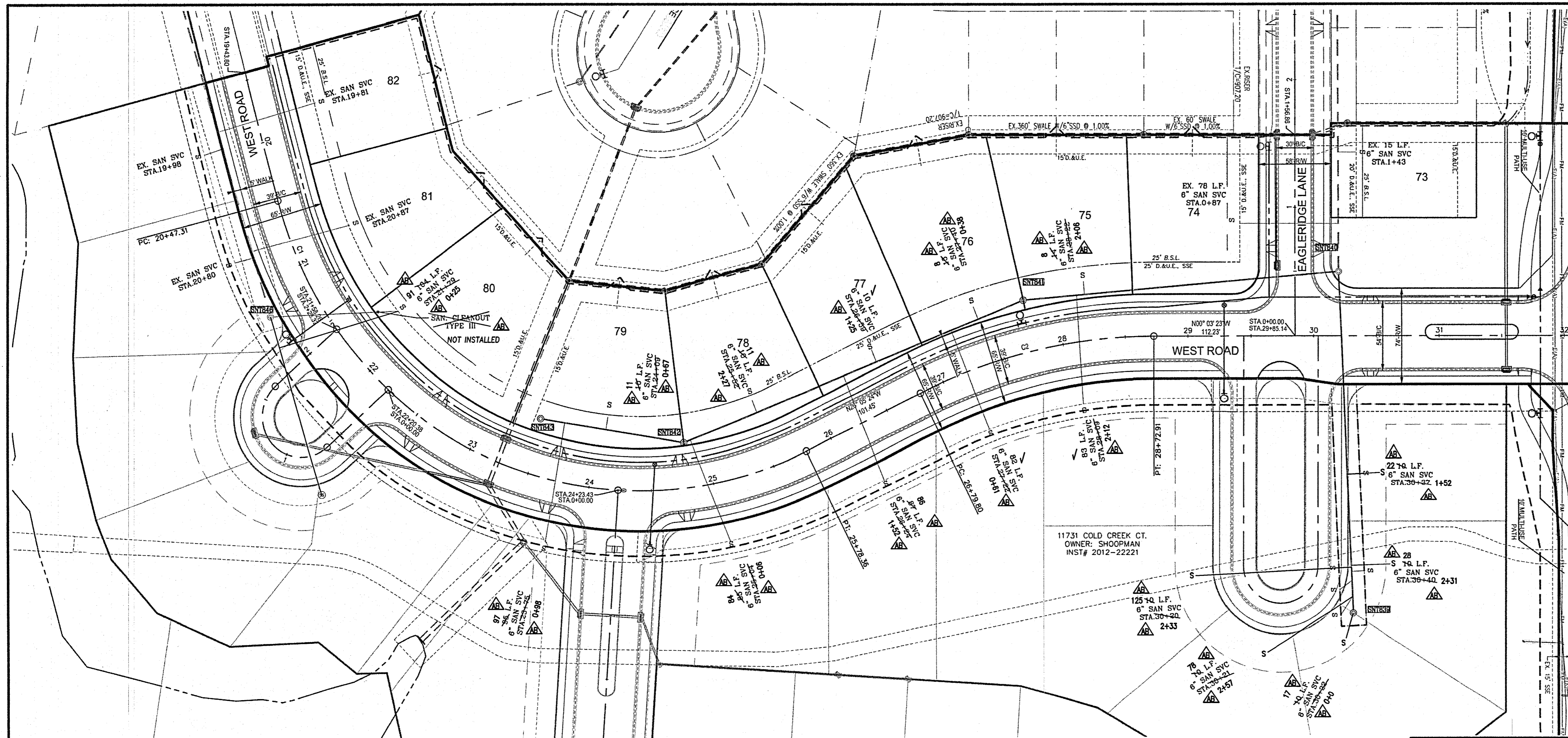
CESO, INC.
8534 YANKEE STREET
DAYTON, OH 45458
PH: (937) 435-8584
EMAIL: MATSON@CESOINC.COM
CONTACT: AARON MATSON

REVISIONS NO.	DATE	DESCRIPTION

SANCTUARY AT 116TH STREET
SECTION TWO B
TITLE SHEET
INDIANA
CITY OF CARMEL



ISSUE:	
REVIEW:	
DATE:	MARCH 29, 2017
JOB NO.:	4431
DESIGN:	JEE
DRAWN:	JEE
CHECKED:	TJV
SHEET NO.:	1



CITY OF CARMEL COVER AND BACKFILL POLICY; 9-8-06
WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN RIGHT-OF-WAY

BEDDING, HAUNCHING, INITIAL BACKFILL
 BEDDING, HAUNCHING AND INITIAL BACKFILL REQUIREMENTS AND COMPACTION FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS SHALL BE IN ACCORDANCE WITH THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION.

FINAL BACKFILL
 FINAL BACKFILL FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS UNDER AND WITHIN 5- FEET OF PAVEMENT OR SIDEWALK OR OTHER PAVED AREAS AND FOR ALL INSTALLATIONS WITHIN CITY RIGHT-OF-WAY SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. THE MATERIAL SHALL BE APPROVED BY THE CITY OF CARMEL DEPARTMENT OF ENGINEERING AT TIME OF INSTALLATION. FINAL BACKFILL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6-INCHES OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUB-BASE OF THE PAVEMENT SHALL BE NO. 53 STONE MEETING THE MATERIAL REQUIREMENT OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY
 FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS REGARDLESS OF JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5- FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

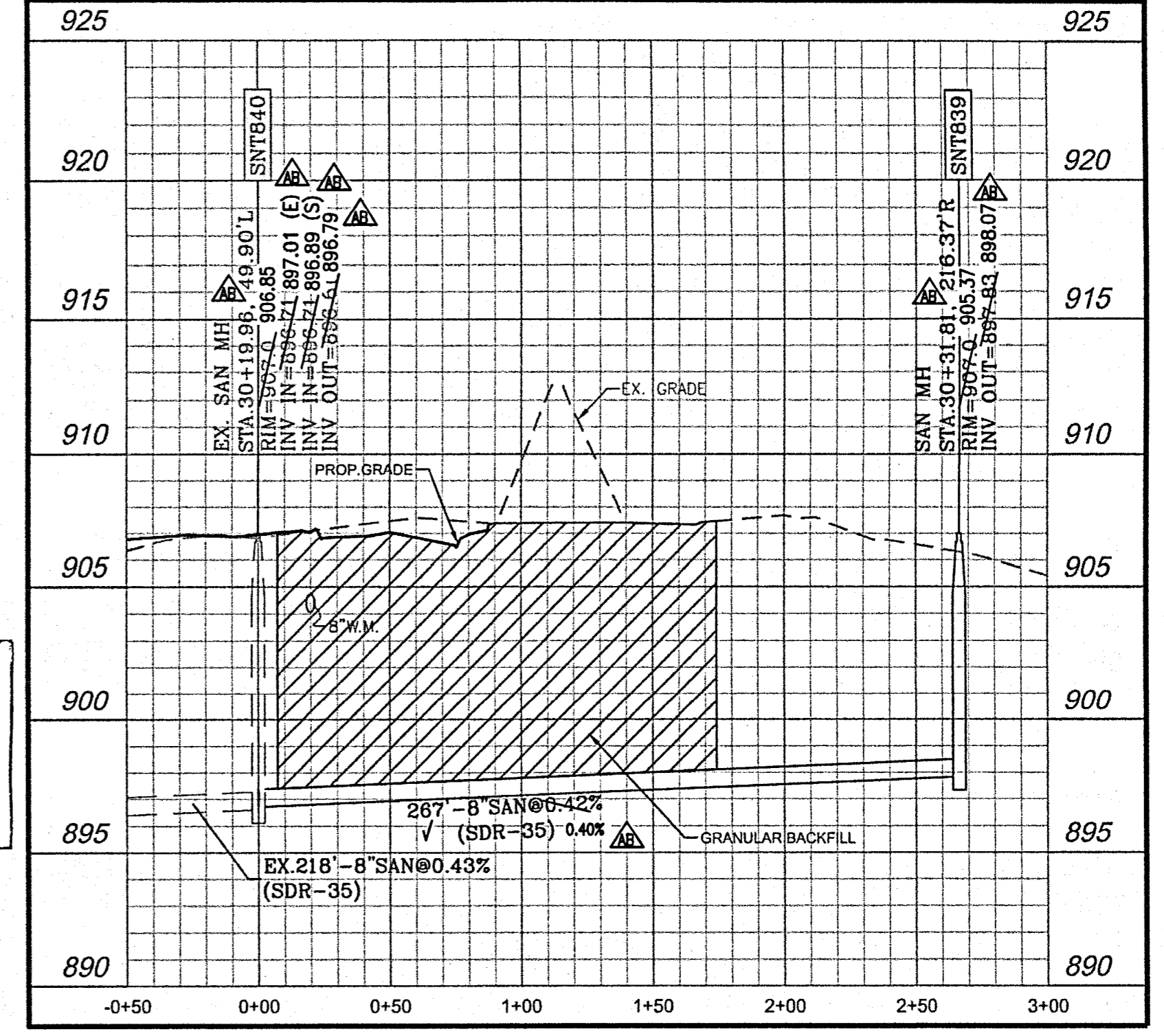
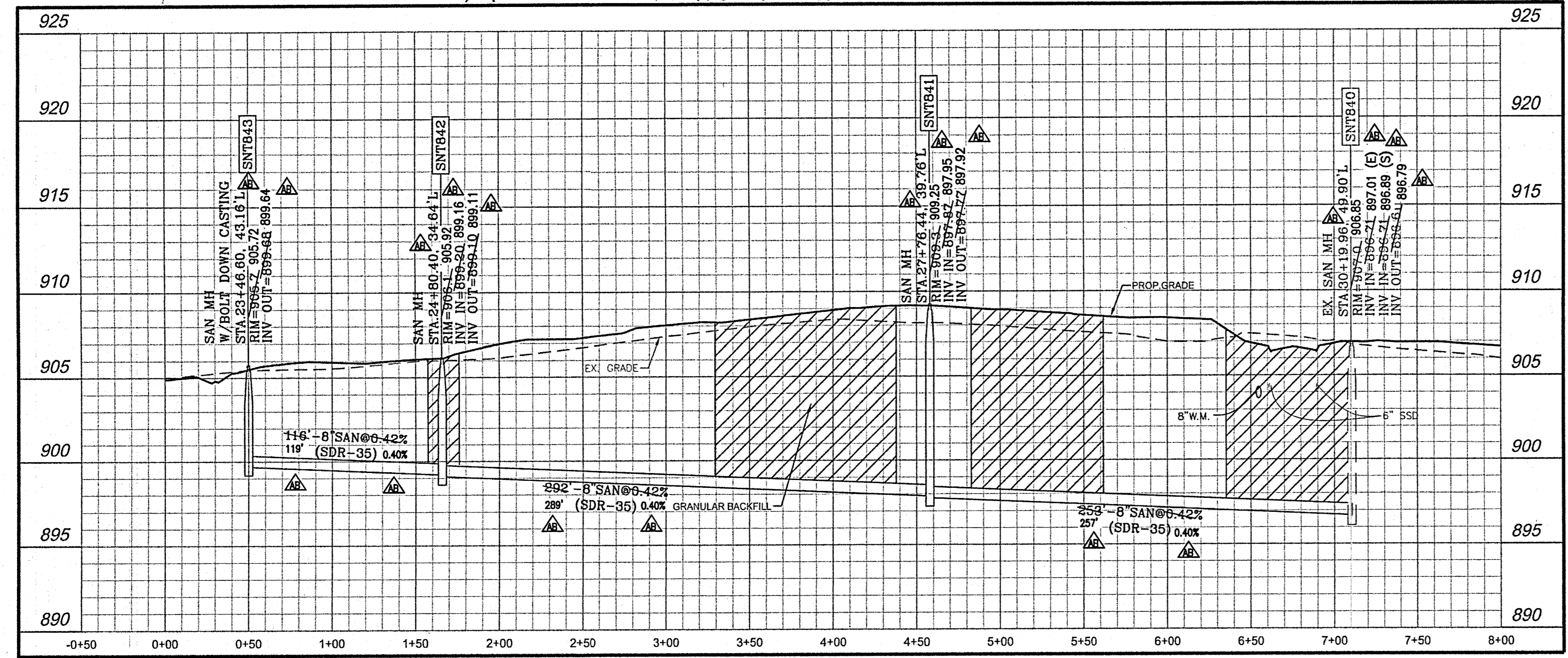
COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

PER STATE RULE 327 IAC 3-6-9, SANITARY SEWERS SHALL NOT BE LOCATED WITHIN TEN (10) FEET OF ANY EXISTING OR PROPOSED WATER MAINS, WHEN MEASURED HORIZONTALLY FROM THE OUTSIDE EDGE OF THE SANITARY SEWER TO THE OUTSIDE EDGE OF ANY EXISTING AND PROPOSED WATER MAINS.

NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

NO.	DATE	DESCRIPTION

SANCTUARY AT 16TH STREET
 SECTION TWO B
 SANITARY PLAN AND PROFILE
 INDIANA
 CITY OF CARMEL



This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.
 Entry Date: 2-20-20
 Entered by: SLM

SANITARY SEWER PLAN AND PROFILE NOTES:

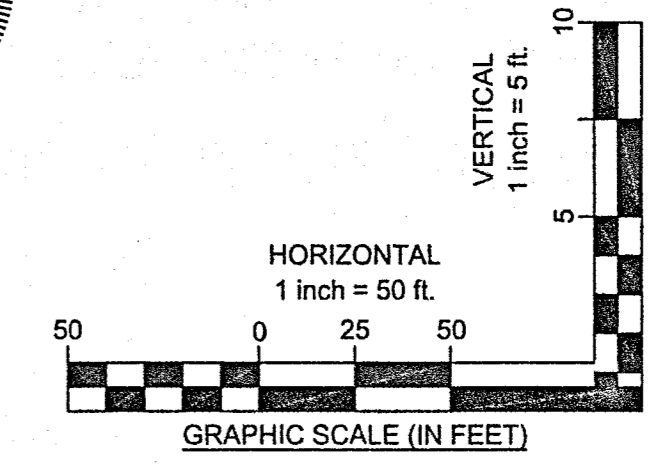
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
- IN ADDITION, EXCAVATIONS EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
- ALL STRUCTURES SHALL HAVE CASTINGS, JOINTS, LIFT RINGS, STEPS AND PIPE CONNECTIONS WELL GROUTED, TROWELED SMOOTH AND BRUSH FINISH.
- ALL STRUCTURES (IE: MANHOLES, INLETS) SHALL HAVE POURED FLOW LINES AND BENCH WALLS. THE FLOW LINES AND BENCH WALLS SHALL BE TROWELED SMOOTH AND BRUSH FINISHED.
- FIELD ADJUSTMENTS OF TOP OF CASTING (T/C) OF STRUCTURES MAY BE REQUIRED TO MEET FIELD CONDITIONS. ADJUSTMENTS EXCEEDING FIVE TENTHS (0.5) OF A FOOT MUST BE APPROVED BY THE ENGINEER TO DETERMINE THE INTEGRITY OF THE STRUCTURE AT NO COST TO THE OWNER.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AS-BUILT DRAWINGS TO THE ACCEPTING AGENCY TO CERTIFY THE ELEVATION AND SLOPE OF SANITARY SEWERS. SEWERS INSTALLED AT A GRADE LESS THAN REQUIRED BY THE AGENCY WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL PROVIDE FOR PERIODIC AS-BUILT CHECKS ON THE SEWER DURING CONSTRUCTION TO ASSURE THAT DESIGN GRADE IS BEING MAINTAINED.
- CONTRACTOR SHALL VERIFY LOCATION & INVERT ELEVATIONS OF EXISTING SANITARY SEWER PRIOR TO START OF CONSTRUCTION.
- ALL SANITARY MANHOLE CASTINGS SHALL BE: NEEHAW R-162A OR ENGINEERED EQUAL WITH CONCEALED PICK HOLES.
- FULL DEPTH GRANULAR BACKFILL SHALL BE REQUIRED UNDER AND WITHIN FIVE (5) FEET OF ALL PAVED AREAS, INCLUDING CURBS, EDGE OF PAVEMENT, AND SIDEWALKS.
- SEE SHEETS 18 - 20 FOR SANITARY SEWER SPECIFICATIONS AND DETAILS.
- ANY DISCREPANCIES OR CONFLICTS WHICH BECOME APPARENT BEFORE OR DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
- ALL MANHOLE TO PIPE CONNECTIONS, INCLUDING LATERALS, SHALL BE A-LOCK, DURA SEAL OR APPROVED EQUAL. PRESS-SCAL, KOR-N-SEAL, AND OTHER FLEXIBLE BOOTS SHALL NOT BE USED IN MANHOLES WITH INVERTS DEEPER THAN 14 FEET.
- CLEAN OUTS ALONG SANITARY LATERALS SHALL BE AT A DISTANCE NO GREATER THAN 100 FEET APART.
- ALL SANITARY SEWER MANHOLE TOP OF CASTINGS SHALL BE A MIN OF 3" ABOVE GRADE IN NON PAVED AREAS.
- ALL LATERALS SHALL BE INSTALLED WITH A "TRACER WIRE" ON THE TOP OF THE PIPE THE ENTIRE LENGTH FROM THE SEWER LINE TO THE CLEANOUT.
- THERE ARE NO PUBLIC WATER SYSTEM DRINKING WATER WELLS WITHIN 200 FEET OF THE PROPOSED SANITARY.
- THERE ARE NO PRIVATE WATER WELLS WITHIN 50 FEET OF THE PROPOSED SANITARY SEWER.

RECORD DRAWING
 SANITARY SEWER AS-BUILTS
 SANITARY SEWER STRUCTURES ONLY
 12-20-2018
 JOSEPH TRTAN, LS21500003



WEIHE ENGINEERS
 Land Surveying | Civil Engineering
 Landscape Architecture

10505 N. College Avenue
 Indianapolis, Indiana 46280
 weihe.net
 317 846-6611
 800 452-6408
 317 843-0546/fax



ISSUE REVIEW	DATE:
	MARCH 29, 2017
JOB NO.:	4431
DESIGN:	JEE
DRAWN:	JEE
CHECKED:	TJV
SHEET NO.	17

RECORD DRAWING

STORM SEWER STRUCTURES ONLY
12-20-2018

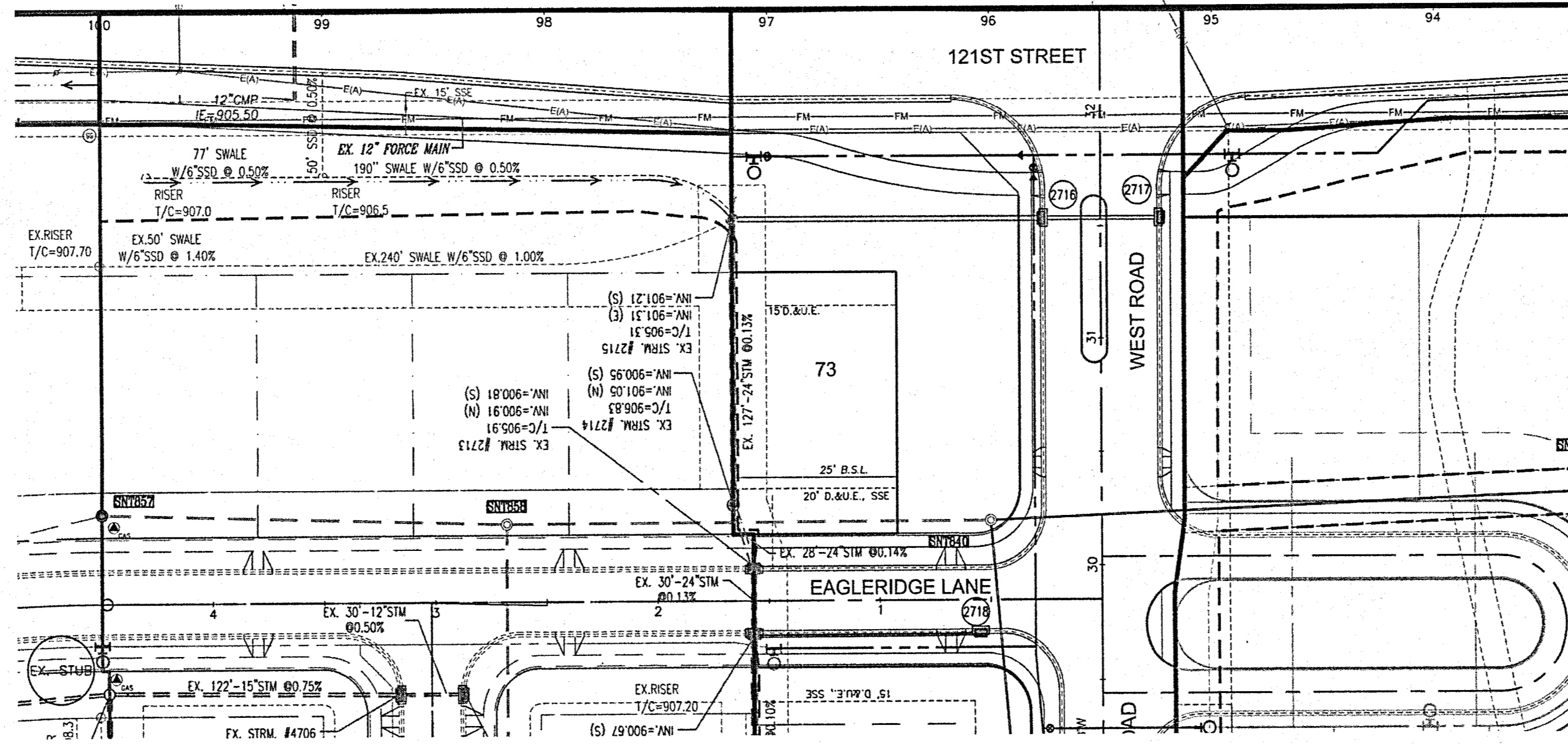
JOSEPH TRIAN, LS21500003



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

- AS-BUILT INFORMATION
- BUILT AS PLANNED

DATE OF LAST FIELDWORK: 11/7/2018



CITY OF CARMEL COVER AND BACKFILL POLICY; 9-8-06

WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN RIGHT-OF-WAY

BEDDING, HAUNCHING, INITIAL BACKFILL

BEDDING, HAUNCHING AND INITIAL BACKFILL REQUIREMENTS AND COMPACTION FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS SHALL BE IN ACCORDANCE WITH THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION.

FINAL BACKFILL

FINAL BACKFILL FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS UNDER AND WITHIN 5-FOOT OF PAVEMENT OR SIDEWALK OR OTHER PAVED AREAS AND FOR ALL INSTALLATIONS WITHIN CITY RIGHT-OF-WAY SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. THE MATERIAL SHALL BE APPROVED BY THE CITY OF CARMEL DEPARTMENT OF ENGINEERING AT TIME OF INSTALLATION. FINAL BACKFILL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6-INCHES OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUB-BASE OF THE PAVEMENT SHALL BE NO. 53 STONE MEETING THE MATERIAL REQUIREMENT OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS REGARDLESS OF JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER. AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT-RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.

STORM SEWER PLAN AND PROFILE NOTES:

FULL DEPTH GRANULAR BACKFILL SHALL BE PER DETAIL 10-28 ON SHEET 23. REFER TO DETAIL 10-28, SHEET 23 FOR TRENCHING, BACKFILL AND COVER REQUIREMENTS. PIPES LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND DOES NOT INCLUDE END SECTIONS.

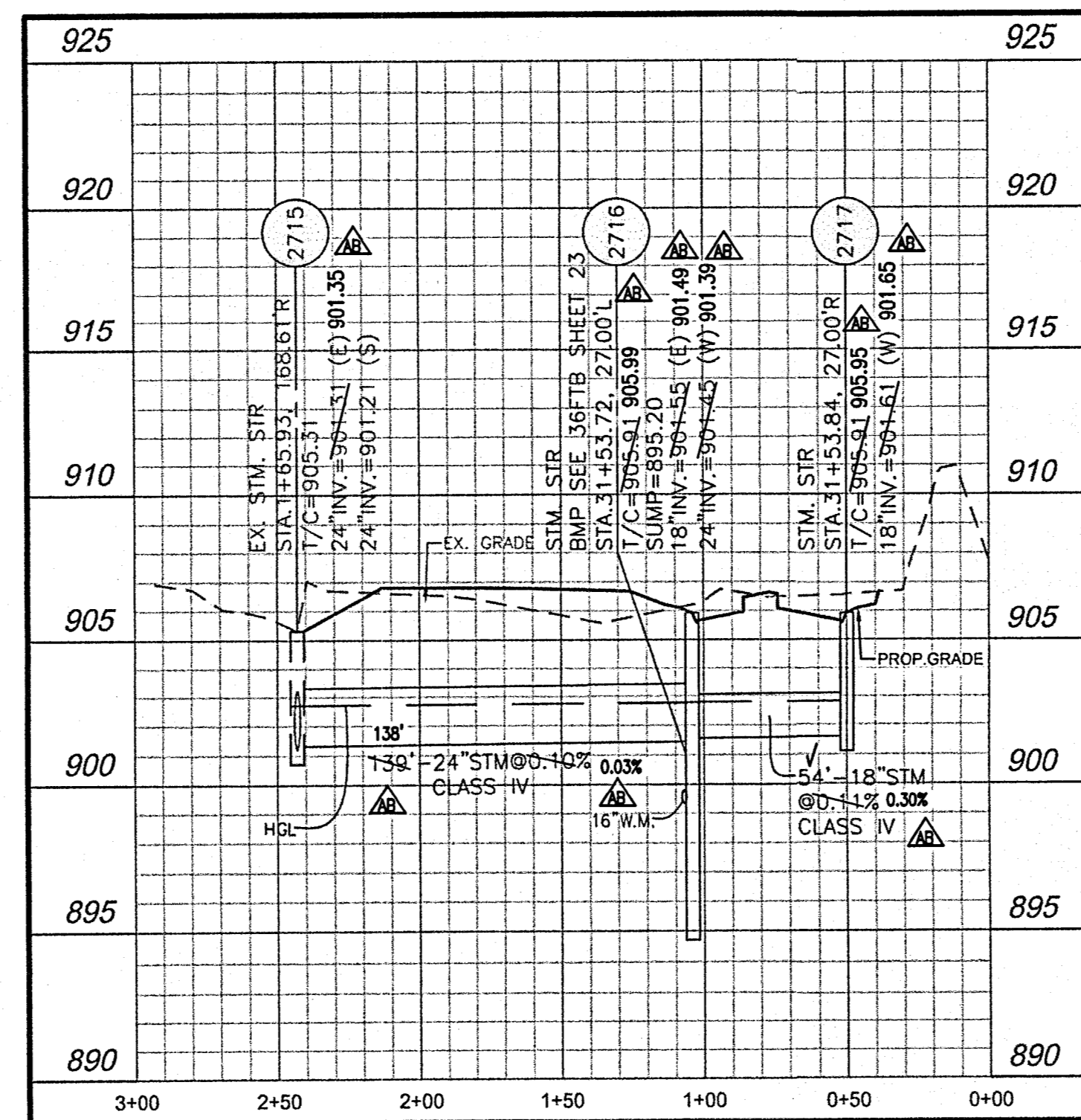
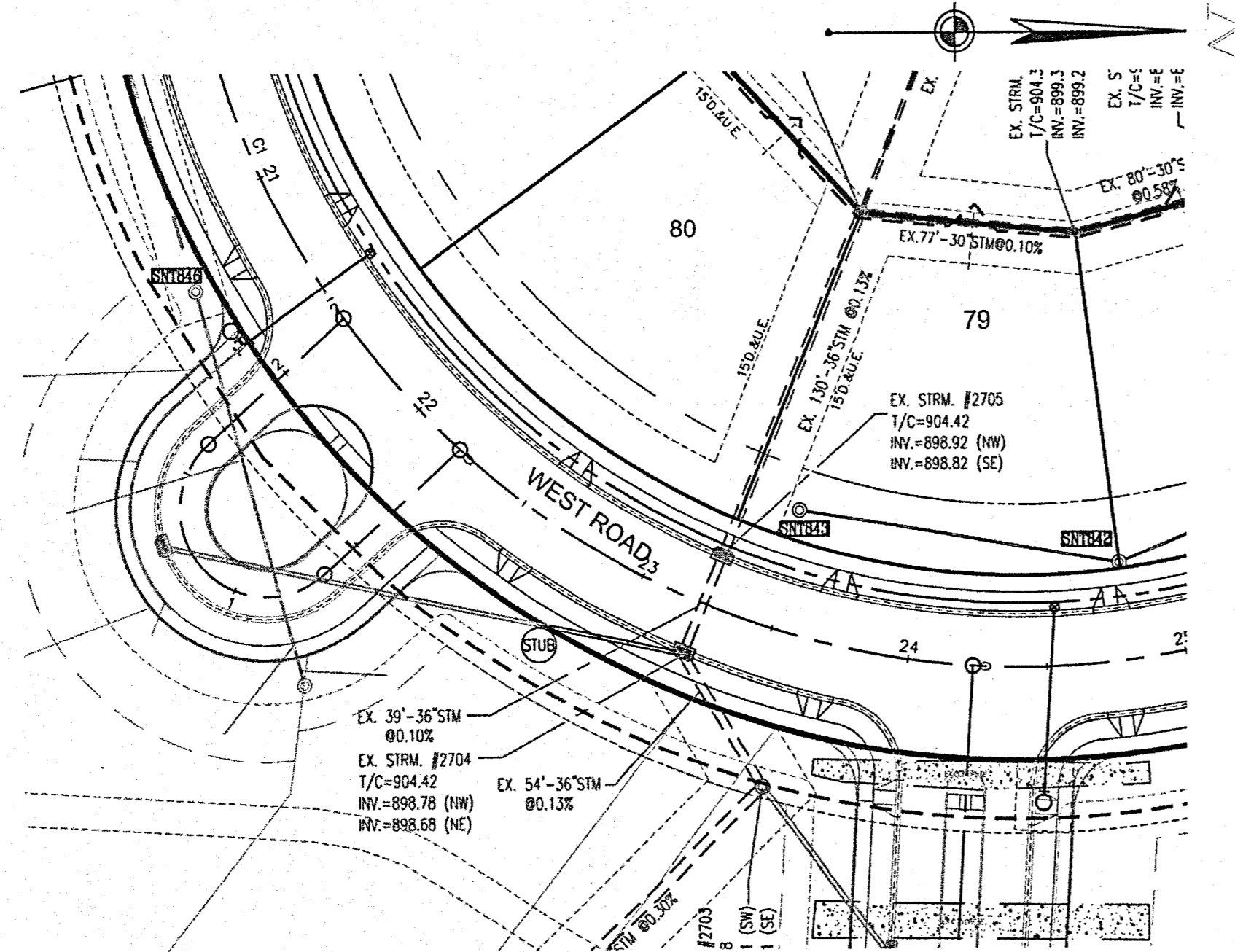
THERE SHALL BE NO FRAMES, CASTINGS, OR VALVE BOX EXTENSIONS IN THE STREET PAVEMENT, CURBS, SIDEWALKS, OR ASPHALT PATH FOR ANY UTILITY INSTALLATIONS IN THE RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLET CASTINGS.

BENCHMARK INFORMATION

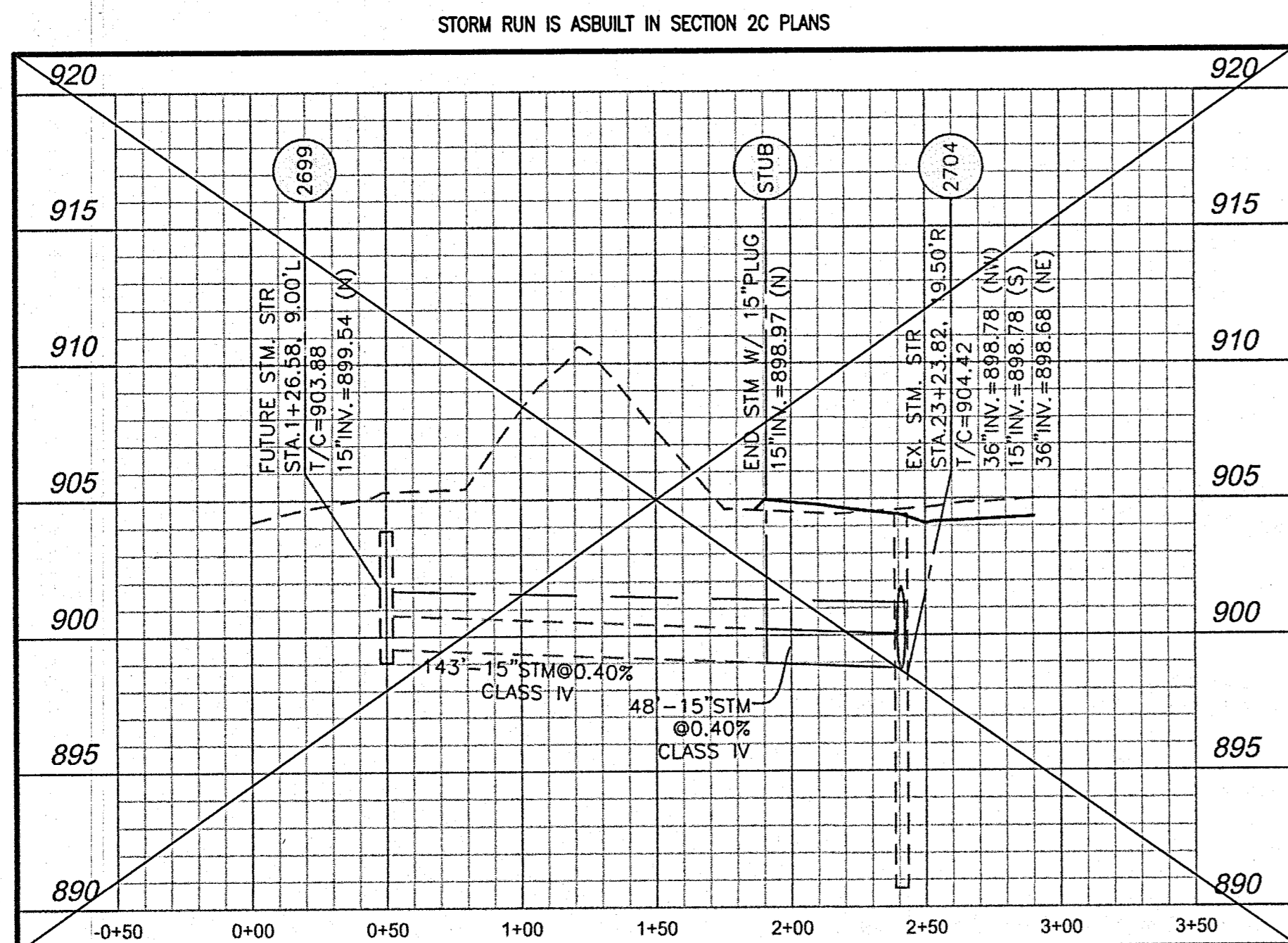
BM 800 54 - A DNR DISK IS LOCATED 1.0 MILE NORTHEAST OF ZIONSVILLE; 0.2 MILES EAST ALONG WEST 121ST STREET FROM ITS JUNCTION WITH STATE ROAD 421, AT THE INTERSECTION OF DAUGHERTY DRIVE AND WEST 121ST STREET, IN THE NORTHEAST 1/4 OF THE INTERSECTION, AT THE ENTRANCE TO THE EAGLE VILLAGE SUBDIVISION; SET IN THE TOP OF A CONCRETE POST, LEVEL WITH THE GROUND; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED '800 54 1989'. ELEV.: 900.76 FEET (1988 DATUM)

HORIZONTAL DATUM: NAD 83 INDIANA STATE PLANE COORDINATE SYSTEM, EAST ZONE

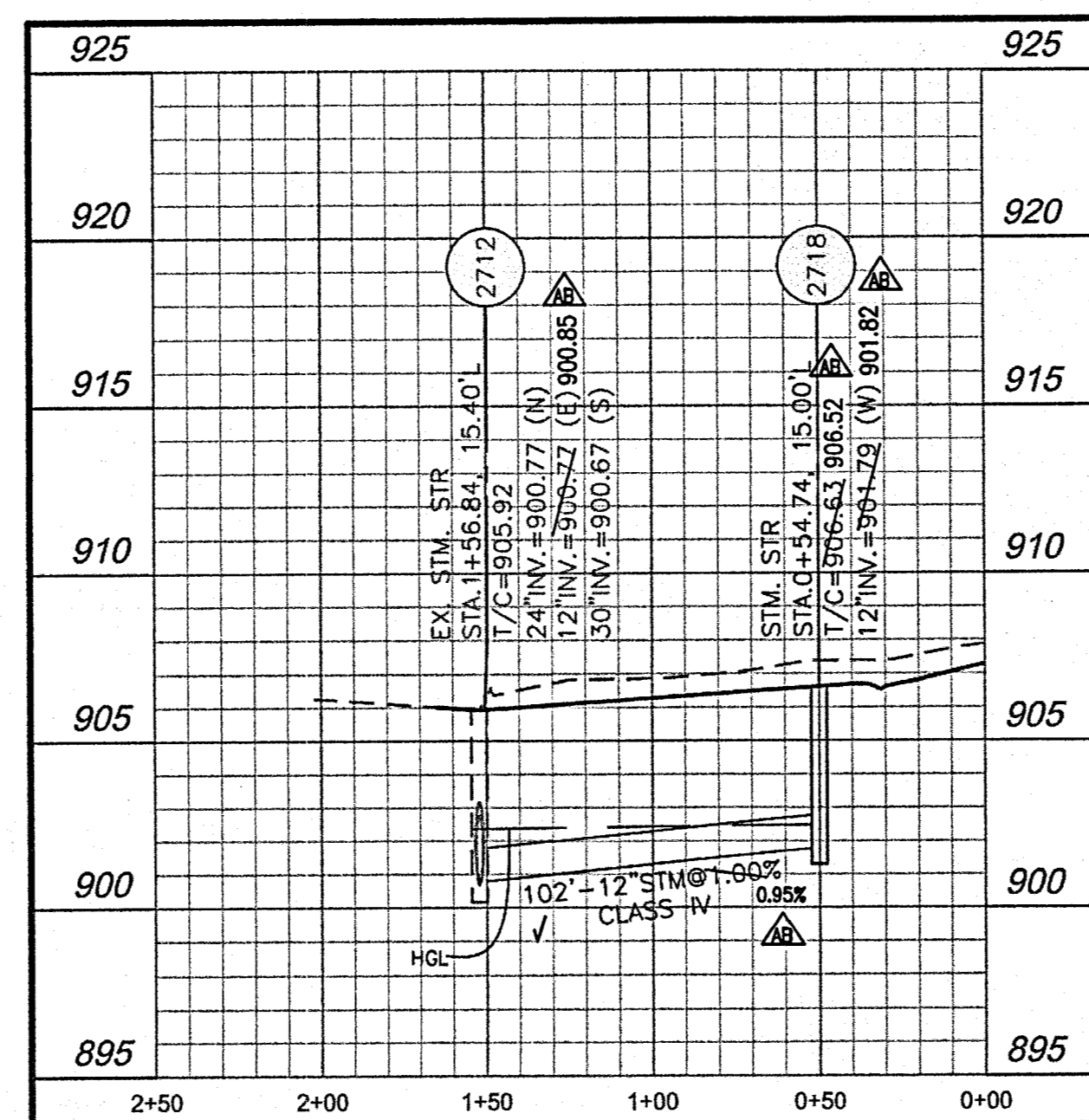
NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.



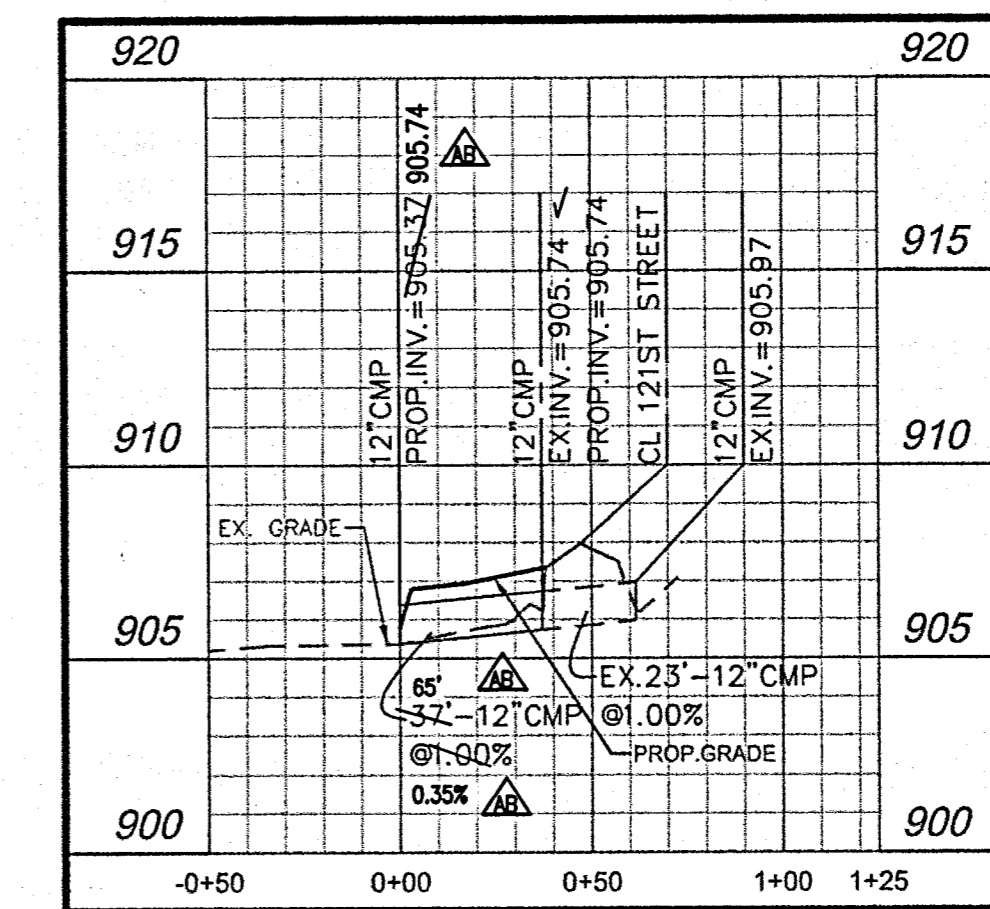
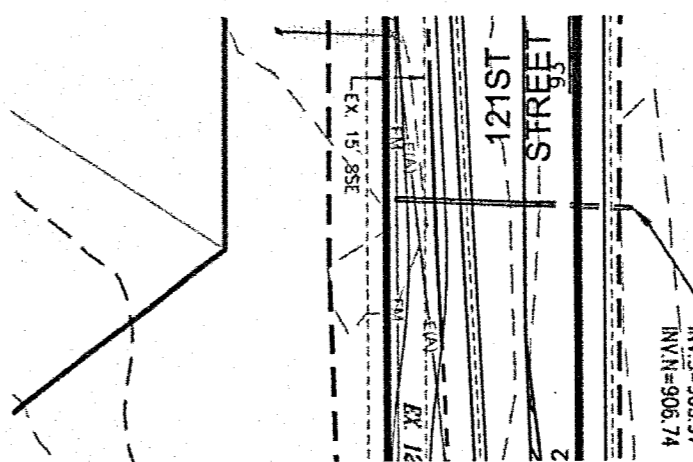
STORM SEWER 2717-2715



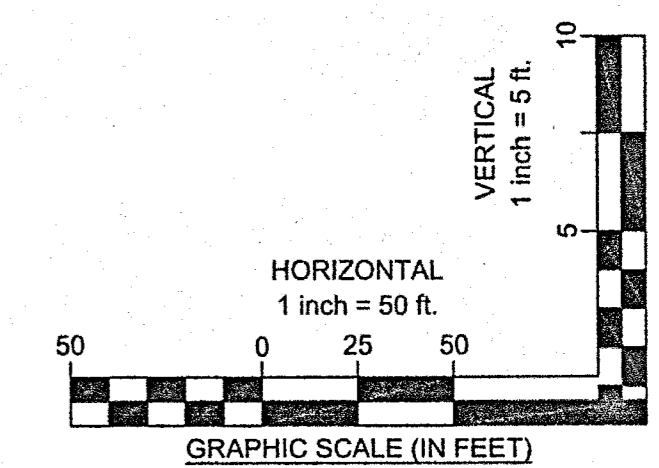
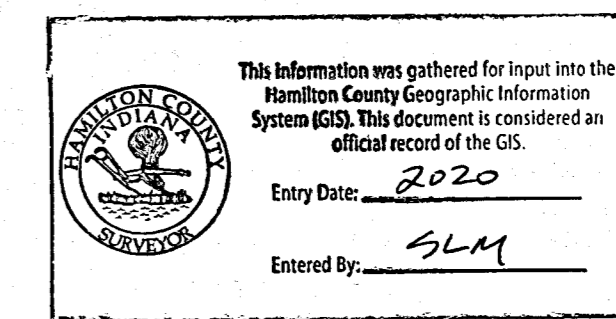
STORM SEWER 2699 - 2704



STORM SEWER 2718-2712



121ST STREET CULVERT



SANCTUARY AT 116TH STREET
 SECTION TWO B
 STORM SEWER PLAN AND PROFILE
 INDIANA
 CITY OF CARMEL



ISSUE: REVIEW
DATE: MARCH 29, 2017
JOB NO.: 4431
DESIGN: JEE
DRAWN: JEE
CHECKED: TJV
SHEET NO. 21

CITY OF CARMEL COVER AND BACKFILL POLICY; 9-8-06

WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN RIGHT-OF-WAY

BEDDING, HAUNCHING, INITIAL BACKFILL

BEDDING, HAUNCHING AND INITIAL BACKFILL REQUIREMENTS AND COMPACTION FOR WATER MAINS, SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS SHALL BE IN ACCORDANCE WITH THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION.

FINAL BACKFILL

FINAL BACKFILL FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS UNDER AND WITHIN 5-FEET OF PAVEMENT OR SIDEWALK OR OTHER PAVED AREAS AND FOR ALL INSTALLATIONS WITHIN CITY RIGHT-OF-WAY SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. THE MATERIAL SHALL BE APPROVED BY THE CITY OF CARMEL DEPARTMENT OF ENGINEERING AT TIME OF INSTALLATION. FINAL BACKFILL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6-INCHES OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUB-BASE OF THE PAVEMENT SHALL BE NO.53 STONE MEETING THE MATERIAL REQUIREMENT OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS REGARDLESS OF JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5-FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER. AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.

STORM SEWER PLAN AND PROFILE NOTES:

FULL DEPTH GRANULAR BACKFILL SHALL BE PER DETAIL 10-28 ON SHEET 23. REFER TO DETAIL 10-28, SHEET 23 FOR TRENCHING, BACKFILL AND COVER REQUIREMENTS. PIPES LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND DOES NOT INCLUDED END SECTIONS.

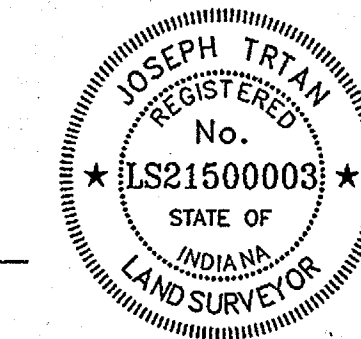
THERE SHALL BE NO FRAMES, CASTINGS, OR VALVE BOX EXTENSIONS IN THE STREET PAVEMENT, CURBS, SIDEWALKS, OR ASPHALT PATH FOR ANY UTILITY INSTALLATIONS IN THE RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLET CASTINGS.

NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

RECORD DRAWING

STORM SEWER AS-BUILTS
STORM SEWER STRUCTURES ONLY
2-3-2017

JOSEPH TRTAN, LS21500003

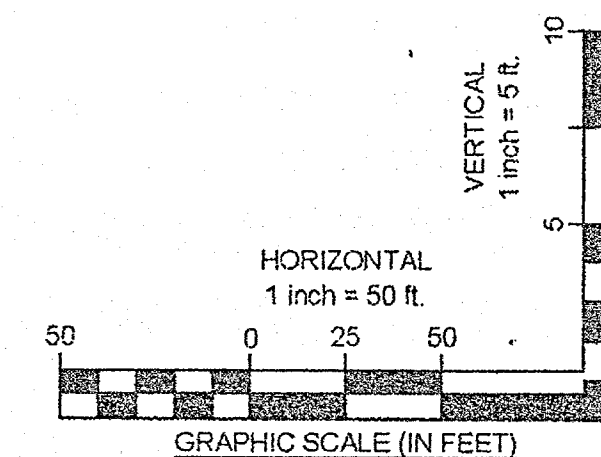
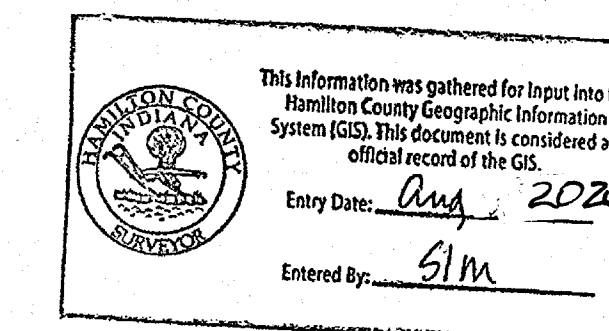


- ▲ - ASBUILT INFORMATION
- ✓ - BUILT AS PLANNED

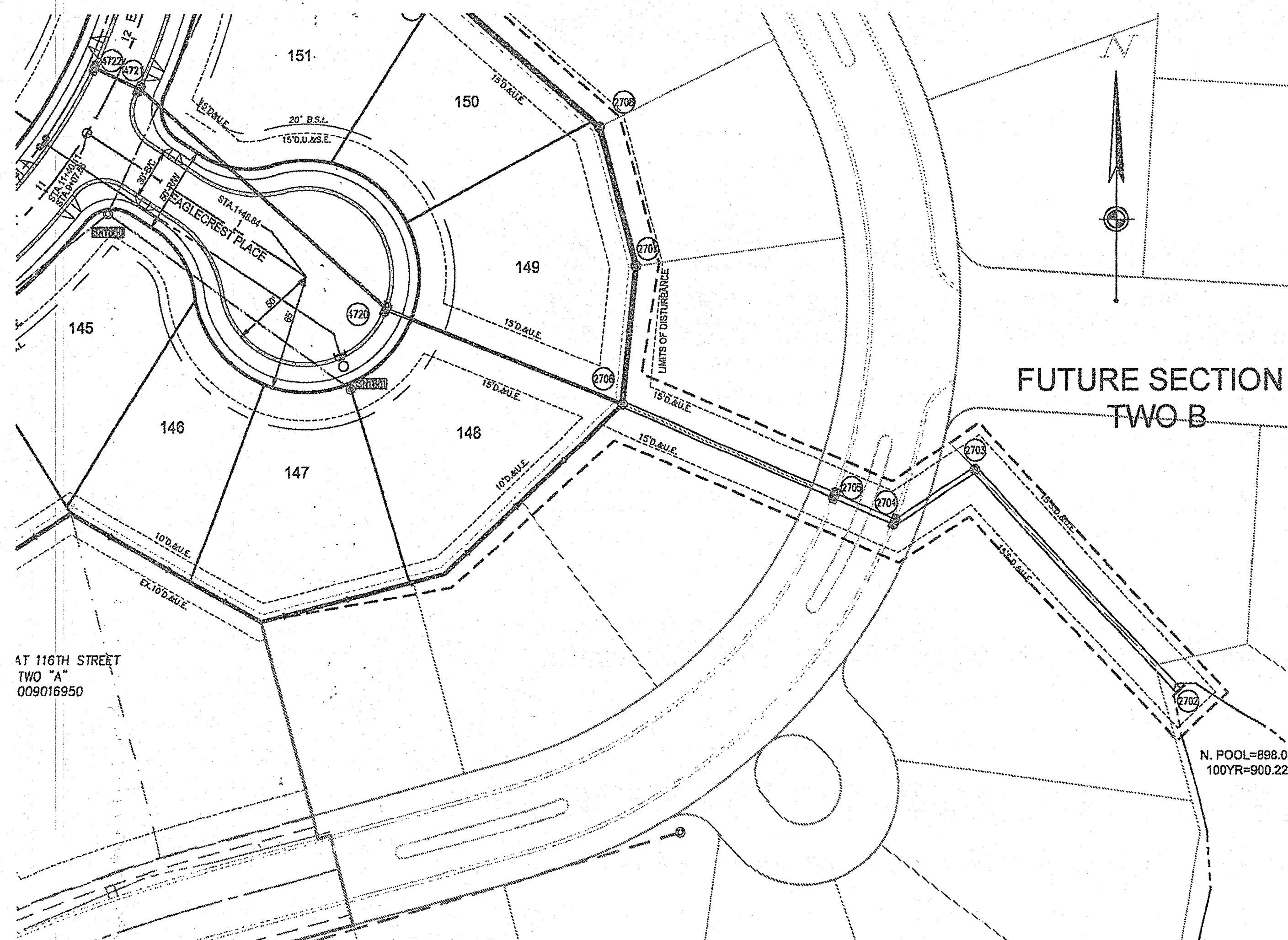
BENCHMARK INFORMATION

BM BOO 54 - A DNR DISK IS LOCATED 1.0 MILE NORTHEAST OF ZIONSVILLE; 0.2 MILES EAST ALONG WEST 121ST STREET FROM ITS JUNCTION WITH STATE ROAD 421, AT THE INTERSECTION OF DAUGHERTY DRIVE AND WEST 121ST STREET, IN THE NORTHEAST 1/4 OF THE INTERSECTION, AT THE ENTRANCE TO THE EAGLE VILLAGE SUBDIVISION, SET IN THE TOP OF A CONCRETE POST, LEVEL WITH THE GROUND; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED "BOO 54 1989". ELEV.: 900.76 FEET (1988 DATUM)

HORIZONTAL DATUM: NAD 83 INDIANA STATE PLANE COORDINATE SYSTEM, EAST ZONE

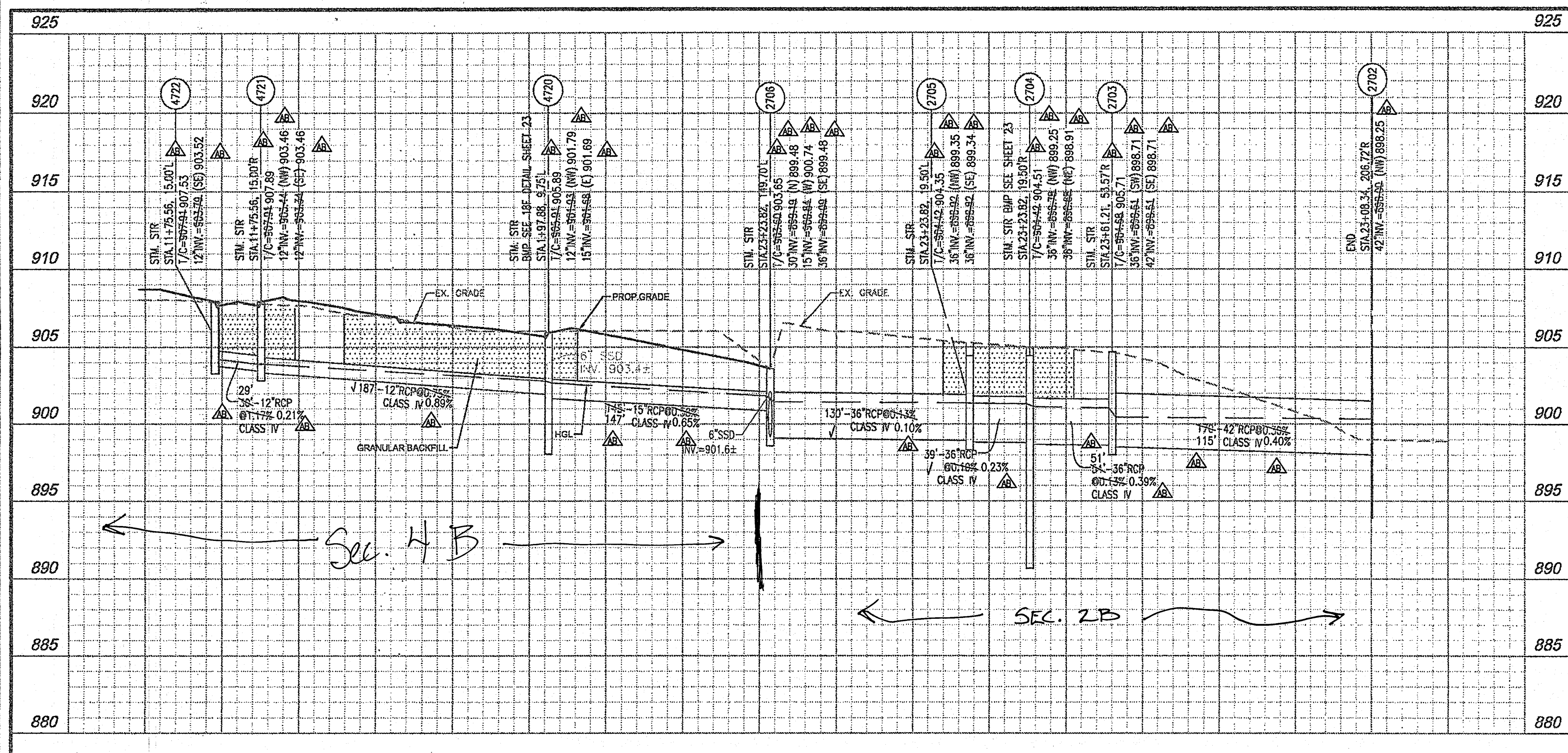


ISSUE: CONSTRUCTION
DATE: OCTOBER 2014
JOB NO.: 4431
DESIGN: JEE
DRAWN: JEE
CHECKED: TJV
SHEET NO. 20



AT 116TH STREET
TWO "A"
009016950

N. POOL=898.00
100YR=900.22



STORM SEWER 4722 - 2702

GRANULAR BACKFILL

APPROVAL PENDING
NOT FOR
CONSTRUCTION

SANCTUARY AT 116TH STREET
SECTION FOUR B : Sec. 2B
STORM SEWER PLAN AND PROFILE
INDIANA
CITY OF CARMEL

cesq
CREATION TO COMPLETION
WWW.CESQINC.COM
Engineering • Architecture • Survey • Construction Mgt • Environmental