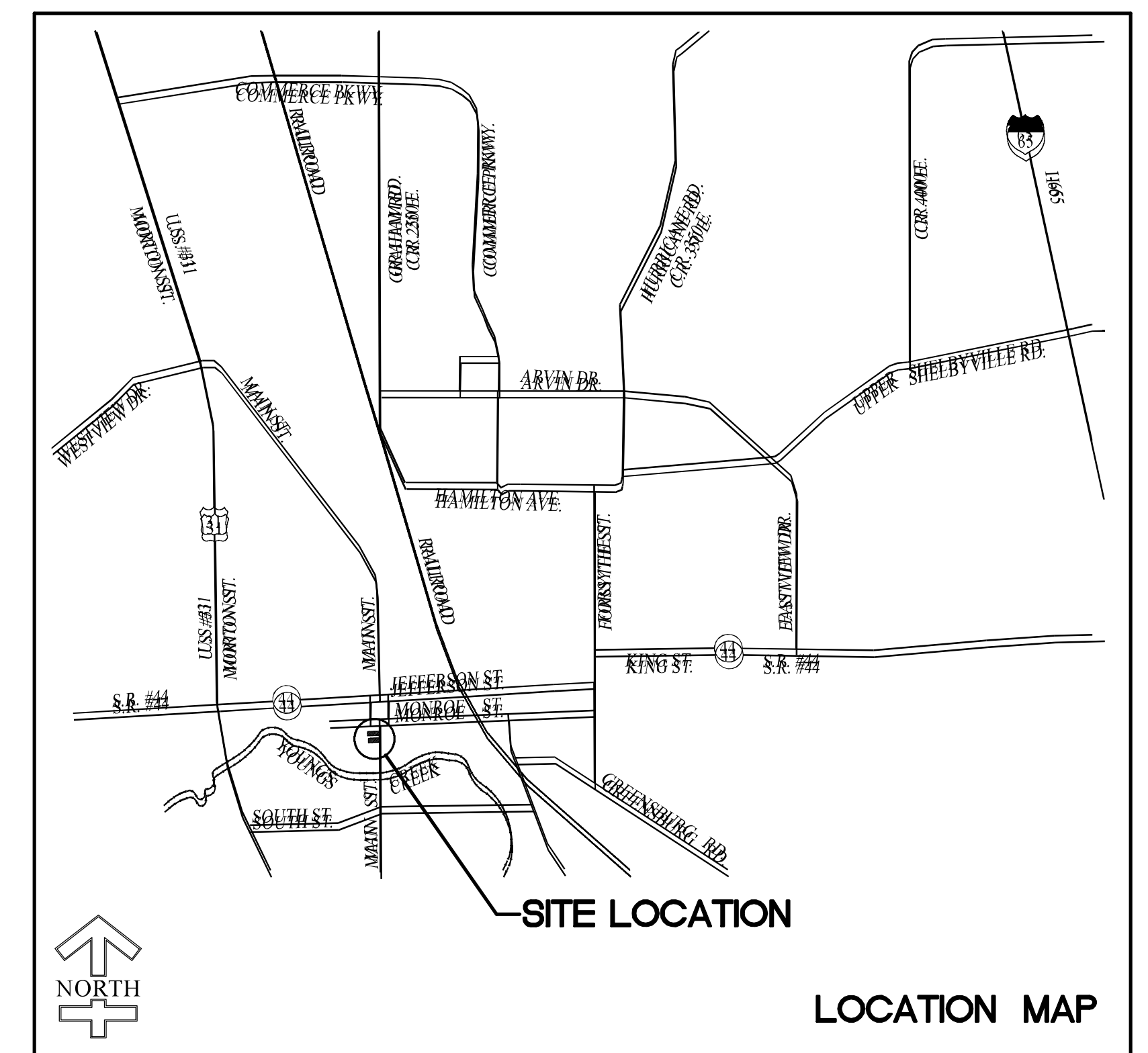
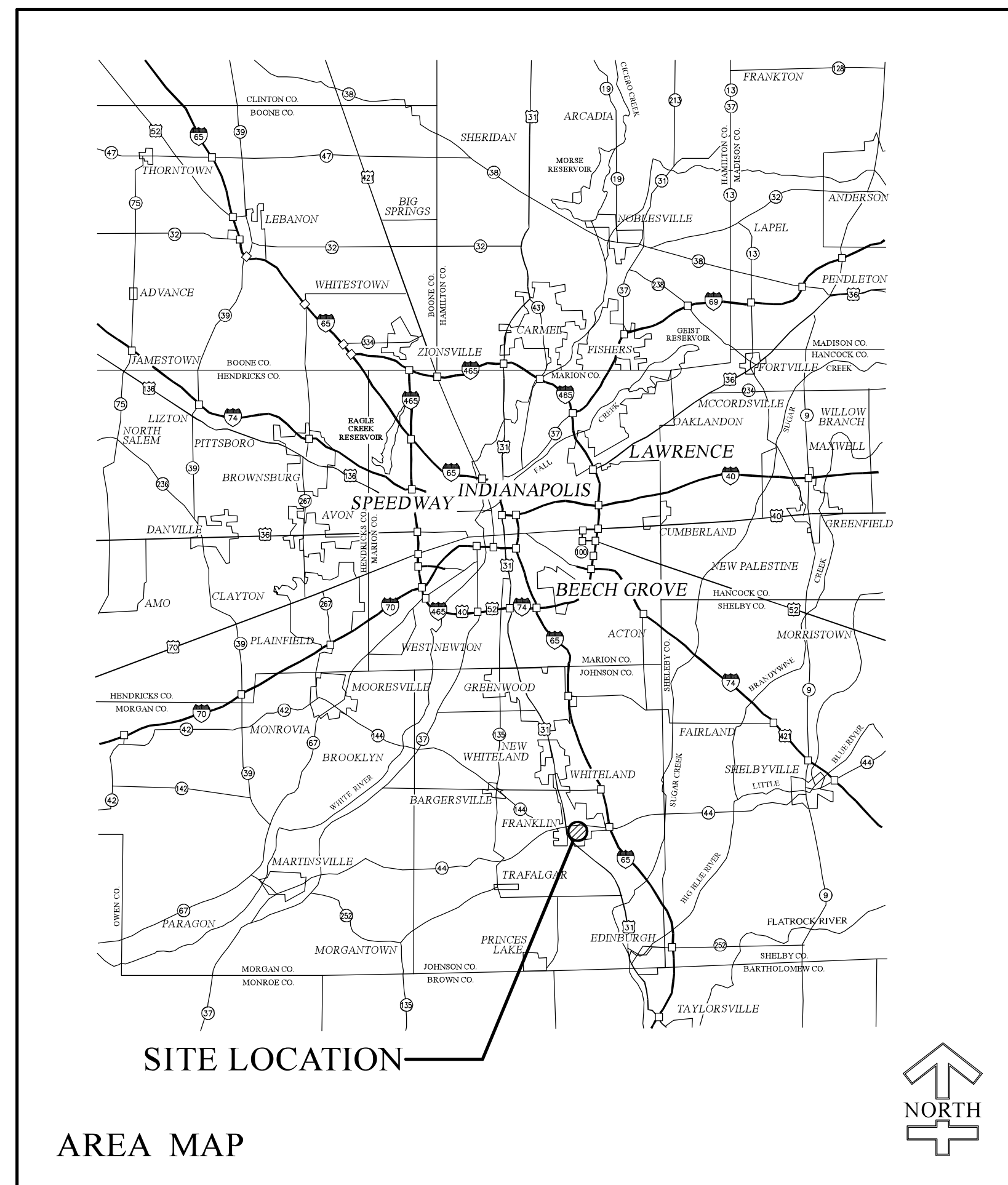


**150 S. MAIN STREET
CONDOMINIUMS
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
CONSTRUCTION PLANS**

PREPARED FOR:
L + L DESIGN-BUILD, LLC
2040 SAINT ANDREWS COURT
FRANKLIN, INDIANA 46131
PHONE: 317-797-6595



**SITE ADDRESS: 150 S. MAIN STREET
FRANKLIN, IN 46131**

[illegible][illegible]

DATES:

EST. PROPOSED START DATE: SPRING 2022
EST. COMPLETION DATE: SPRING 2023

USE:

PROPOSED USE:	MXD-MIXED USE DOWNTOWN CENTER
EXISTING ZONING:	MXD-MIXED USE DOWNTOWN CENTER

UTILITY CONTACT INFORMATION

SANITARY SEWERS
FRANKLIN PUBLIC WORKS
796 SOUTH STATE ST.
FRANKLIN, IN 46131
PHONE #: (317) 736-3640
CONTACT: RICK LITTLETON
DPWSUPERINTENDENT@FRANKLIN.IN.GOV

TELEPHONE
CENTURYLINK
1147 NORTH MORTON STREET
FRANKLIN, IN 46131
PHONE #: (317) 736-4863
CONTACT: DAVID MEYERS
DAVID.MEYERS@CENTURYLINK.COM

WATER
INDIANA—AMERICAN WATER CO.
153 N. EMERSON AVE.
GREENWOOD, IN 46143
PHONE #: (317) 885-2426
CONTACT: TRACY S. WHITE
TRACY.S.WHITE@AMWATER.COM

ELECTRIC
DUKE ENERGY
2515 N. MORTON ST.
FRANKLIN, IN 46131
PHONE #: (317) 736-2014
CONTACT: JOE NUENSWANDER
JOSEPH.NUENSWANDER@DUKE-ENERGY.COM

TELEPHONE
METRONET
111 COMMERCE DRIVE
FRANKLIN, IN 46131
PHONE #: (317) 465-1046
CONTACT: CHRISTOPHER BLUTO
CHRISTOPHER.BLUTO@METRONETINC.COM

CABLE
COMCAST
1600 WEST VERNAL PIKE
BLOOMINGTON IN 47404
PHONE #: (812) 355-7822
CONTACT: STEVE MCARTOR
STEVE_MCARTOR@CABLE.COMCAST.COM

GAS
VECTREN
600 INDUSTRIAL DRIVE
FRANKLIN, IN 46131
PHONE #: (317) 776-5585
CONTACT: RANDY CRUTCHFIELD
RCRUTCHFIELD@VECTREN.COM

LEGAL DESCRIPTION

(DEED OF RECORD)
INSTRUMENT NUMBER 2020-005609

LOT NUMBER 77 IN THE ORIGINAL PLAT OF THE TOWN, NOW CITY OF
FRANKLIN AN ADDITION TO THE CITY OF FRANKLIN AS RECORDED IN
PLAT BOOK 1 PAGE 1 IN THE OFFICE OF THE RECORDER OF JOHNSON
COUNTY, INDIANA.

PROPERTY LINES, DIMENSIONS AND EASEMENTS ARE PER THE
ALTA/ACSM LAND TITLE SURVEY PREPARED BY PROJECTS PLUS
D.B.A. GREENWOOD SURVEYING COMPANY, DATED APRIL 16, 2021

TOPOGRAPHICAL INFORMATION, INCLUDING UTILITIES, ARE PER THE
TOPOGRAPHIC SURVEY PREPARED BY PROJECTS PLUS D.B.A.
GREENWOOD SURVEYING COMPANY

CERTIFIED BY:

Jeffery K. Smith 2/4/22
JEFFERY K. SMITH
REGISTERED ENGINEER NO. 19419
STATE OF INDIANA



PREPARED BY:

PROJECTS *plus*

GREENWOOD SURVEYING COMPANY

SITE ENGINEERING—LAND SURVEYING—CONSTRUCTION LAYOUT
1257 Airport Parkway Suite A - Greenwood, Indiana 46143
(317)-882-5003

SHEET **C001** OF **10**

JOB #21016

GENERAL NOTES:

- WHEREVER A CONFLICT OR DEFICIENCY OCCURS BETWEEN THE CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THESE CONSTRUCTION DRAWINGS AND THE STANDARDS ADOPTED BY THE CITY OF FRANKLIN. THE CITY OF FRANKLIN STANDARDS OR SPECIFICATIONS SHALL APPLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE TOWN, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
- ALL DIMENSIONS SHOWN ARE MEASURED TO THE FACE OF CURB, UNLESS OTHERWISE SHOWN.
- DIMENSIONS TO THE BUILDING ARE MEASURED TO THE EXTERIOR OF THE FOUNDATION WALL UNLESS OTHERWISE SHOWN.
- BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE. REFER TO RECORDED PLATS AND SURVEYS FOR ADDITIONAL PROPERTY INFORMATION.
- REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND DETAILS.
- CONTRACTORS SHALL CONSULT ARCHITECTURAL, PLUMBING AND ELECTRICAL PLANS FOR: INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
- ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS.
- TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO RECEIVE PAVING AND FROM WITHIN THE LIMITS OF PROPOSED BUILDINGS AND STRUCTURES. TOPSOIL SHALL BE STRIPPED TO THE DEPTH OF 6 INCHES.
- TOPSOIL SHALL BE PLACED TO A DEPTH OF 4 TO 6 INCHES IN ALL AREAS TO BE SEEDED OR SODDED PER THE STORM WATER POLLUTION PREVENTION SPECIFICATIONS.
- EXCESS TOPSOIL SHALL BE REMOVED FROM SITE OR BE PLACED IN MOUNDING AREAS AND NONSTRUCTURAL FILL AREAS.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED, SODDED AND/OR LANDSCAPED.
- FINAL GRADES AT THE PROJECT BOUNDARY SHALL MATCH EXISTING ELEVATIONS UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PERFORM AN EARTHWORK QUANTITY ANALYSIS PRIOR TO COMMENCING CONSTRUCTION TO CONFIRM SUCH QUANTITIES WITH THE ENGINEER. ADJUSTMENTS TO PROPOSED FINISH GRADES BASED UPON THE EARTHWORK QUANTITY ANALYSIS SHALL BE APPROVED BY THE ENGINEER.
- CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.
- ALL UTILITY CROSSINGS OR TRENCHES WITHIN (5) FEET OF THE EDGE OF OF PAVEMENT SHALL BE BACKFILLED TO THE SUB-GRADE WITH GRANULAR MATERIAL (THE UPPERMOST 48" OF GRANULAR MATERIAL SHALL BE #53 STONE) AND COMPACTED IN SIX INCH LIFTS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS, ETC. AS RELATED TO THEIR WORK. NOTIFY ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
- THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF THE CONTRACT ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES, PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
- THE STORM SEWER PIPE SYSTEM IS PRIVATELY OWNED AND MAINTAINED.
- ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION; CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS THE EXISTING SECTION BY THE CONTRACTOR DOING THE WORK.
- THE PAVING/SUBGRADE CONTRACTOR SHALL NOTIFY THE ENGINEERING DEPARTMENT (317) 736-3631 AT LEAST 24 HOURS PRIOR TO PROOF ROLL ON THE PROPOSED STREETS WITHIN PUBLIC RIGHT OF WAY.
- ALL TRAFFIC CONTROL SIGNAGE AND DEVICES SHALL MEET I.M.U.C.T.D. STANDARDS.

CONSTRUCTION KEYNOTES

- [A] PROPOSED ASPHALT PAVEMENT
[B] PROPOSED CONCRETE SIDEWALK
[C] PROPOSED CONCRETE PARKING BUMPER
[D] PROPOSED CONCRETE DUMPSTER PAD
[E] PROPOSED 6' x 9' ENCLOSED DUMPSTER
[H] PROPOSED BUILDING SUPPORT (SEE ARCHITECTURAL PLANS)
[J] PROPOSED GRASS AND MULCH AREA
[K] EXISTING ASPHALT PAVEMENT TO BE PROTECTED
[L] EXISTING CONCRETE CURB TO BE PROTECTED
[M] EXISTING CONCRETE SIDEWALK TO BE PROTECTED
[N] EXISTING POWER POLE TO BE PROTECTED
[O] EXISTING BRICK SHED TO BE PROTECTED
[P] EXISTING FENCE TO BE PROTECTED
[Q] EXISTING LANDSCAPING TO BE PROTECTED
[R] PROPOSED DECIDUOUS TREE TO BE PLANTED
[S] PROPOSED CONCRETE-FILLED BOLLARD

NOTICES AND PERMITS

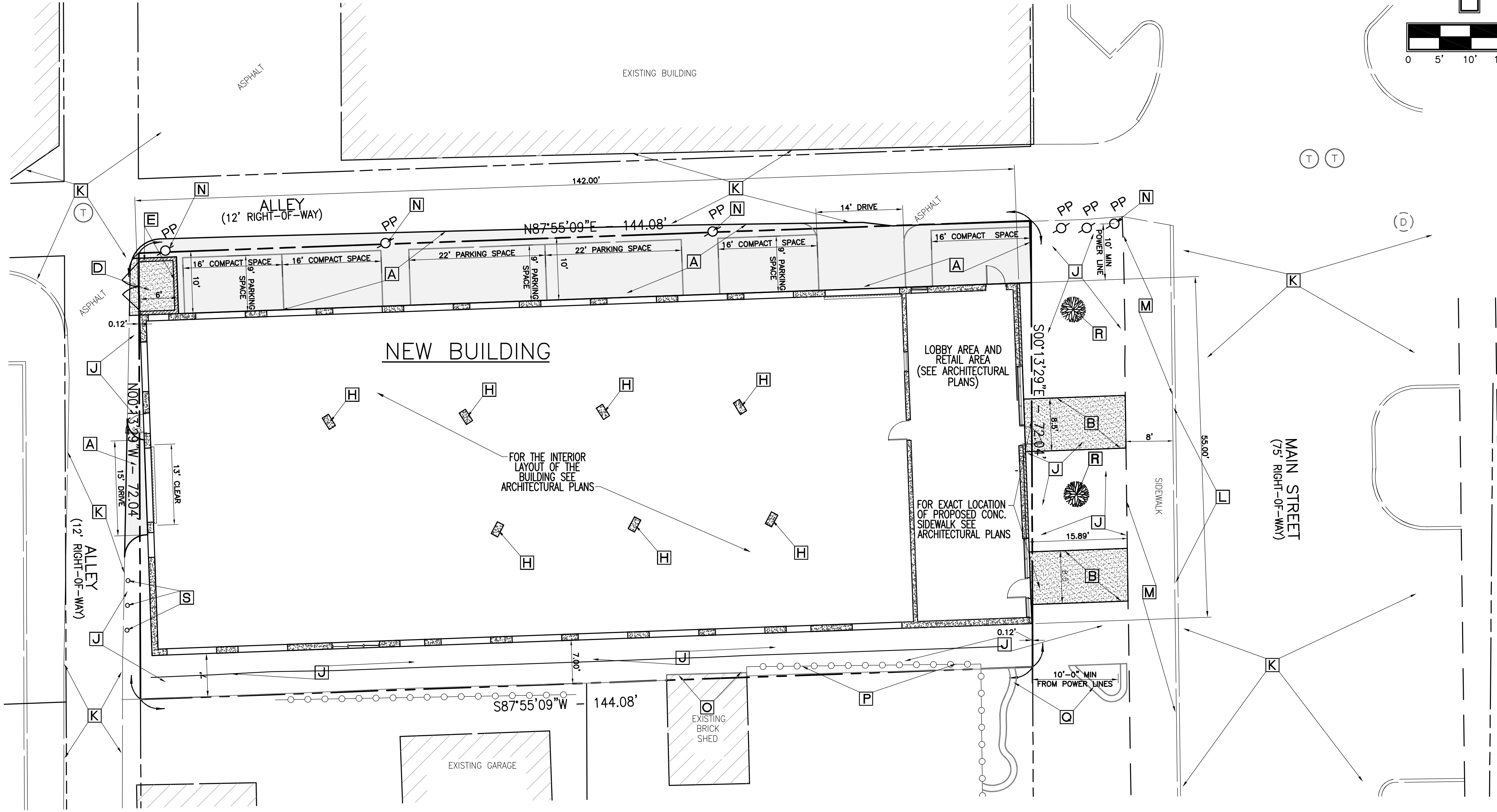
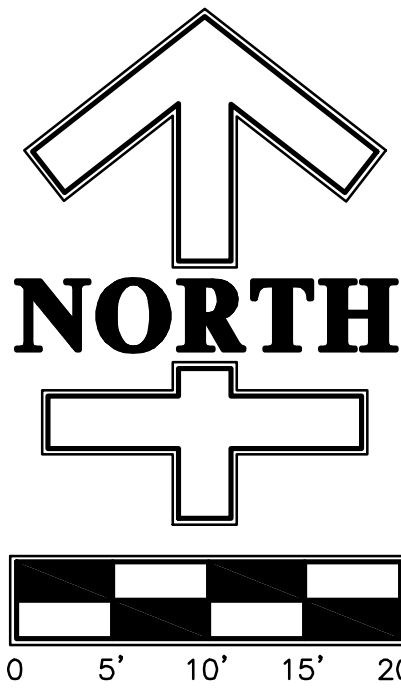
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- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

LEGAL DESCRIPTION

(DEED OF RECORD)
INSTRUMENT NUMBER 2020-005609

LOT NUMBER 77 IN THE ORIGINAL PLAT OF THE TOWN, NOW CITY OF FRANKLIN AN ADDITION TO THE CITY OF FRANKLIN AS RECORDED IN PLAT BOOK 1 PAGE 1 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA.

PROPERTY LINES, DIMENSIONS AND EASEMENTS ARE PER THE ALTA/ACSM LAND TITLE SURVEY PREPARED BY PROJECTS PLUS D.B.A. GREENWOOD SURVEYING COMPANY, DATED APRIL 16, 2021
TOPOGRAPHICAL INFORMATION, INCLUDING UTILITIES, ARE PER THE TOPOGRAPHIC SURVEY PREPARED BY PROJECTS PLUS D.B.A. GREENWOOD SURVEYING COMPANY.



SITE DATA:

GENERAL:
CONSTRUCTION AREA - 0.238 ACRES

PARKING:
PARKING REQUIRED : 24 PARKING SPACES (INCLUDING 1 ACCESS SPACE)
PARKING PROVIDED : 24 PARKING SPACES (INCLUDING 1 ACCESS SPACE)

ZONING DATA:
ZONING DISTRICT: MXD - MIXED USE DOWNTOWN CENTER
ADJACENT ZONING CLASSIFICATIONS:
NORTH: MXD - MIXED USE DOWNTOWN CENTER
WEST: MXD - MIXED USE DOWNTOWN CENTER
SOUTH: MXD - MIXED USE DOWNTOWN CENTER
EAST: MXD - MIXED USE DOWNTOWN CENTER

FIRE DEPARTMENT NOTES:

- PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS THE BITUMINOUS BASE AND BINDER LAYERS FOR ALL STREETS, DRIVES AND PARKING LOTS TO BE INSTALLED AND ALL WATER MAINS AND HYDRANTS FOR THE SITE DEVELOPMENT MUST BE INSTALLED PER APPROVED SPECIFICATIONS AND MADE SERVICEABLE.
- PRIOR TO ISSUANCE OF ANY BUILDING PERMITS THE STONE SUB-BASE SHALL BE GRADED AND COMPACTED IN COMPLIANCE WITH FIRE DEPARTMENT SPECIFICATIONS. A PROOF ROLL SHALL BE WITNESSED BY THE FIRE DEPARTMENT OR THEIR DESIGNEE. THE FRANKLIN FIRE DEPARTMENT SHALL BE NOTIFIED 24 HOURS PRIOR TO THE INSPECTION, 317-736-3650.

LEGEND:

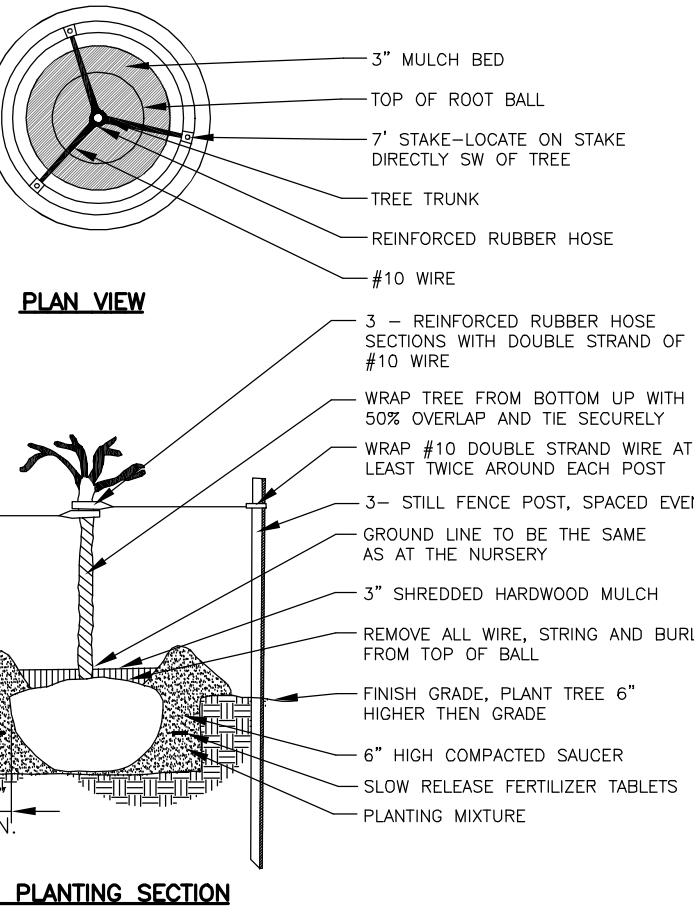
- [S] EXISTING SANITARY SEWER AND MANHOLE
[D] EXISTING STORM SEWER AND STRUCTURE
[OHP] EXISTING OVERHEAD POWER AND POWER POLE
[T] EXISTING BURIED COMMUNICATION CABLE AND MANHOLE
[FENCE] EXISTING FENCE
[TREE] PROPOSED DECIDUOUS TREE TO BE PLANTED

[ASPHALT] PROPOSED ASPHALT PAVEMENT

[CONCRETE] PROPOSED CONCRETE WALK OR PAD

KEY	PLANT COMMON NAME	MIN. SIZE	PLANT BOTANIC NAME	QUANTITY	CATEGORY
R	RED MAPLE	2 1/2"	ACER RUBRUM	2	SHADE

LANDSCAPE LEGEND		
SYMBOL	REQUIREMENT	QUANTITY
[R]	STREET TREE - TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN SUBDIVISION CONTROL ORDINANCE 6.15. a. ONE STREET TREE FOR EVERY 35' OF STREET FRONTAGE. b. MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL. c. NOT WITHIN 25' OF AN INTERSECTION. d. NOT WITHIN 2' OF SIDEWALK, CURB OR PAVEMENT. e. NOT WITHIN 10' OF HYDRANT OR LATERAL. f. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE PERMITTED STREET TREE TABLE.	2 TREES



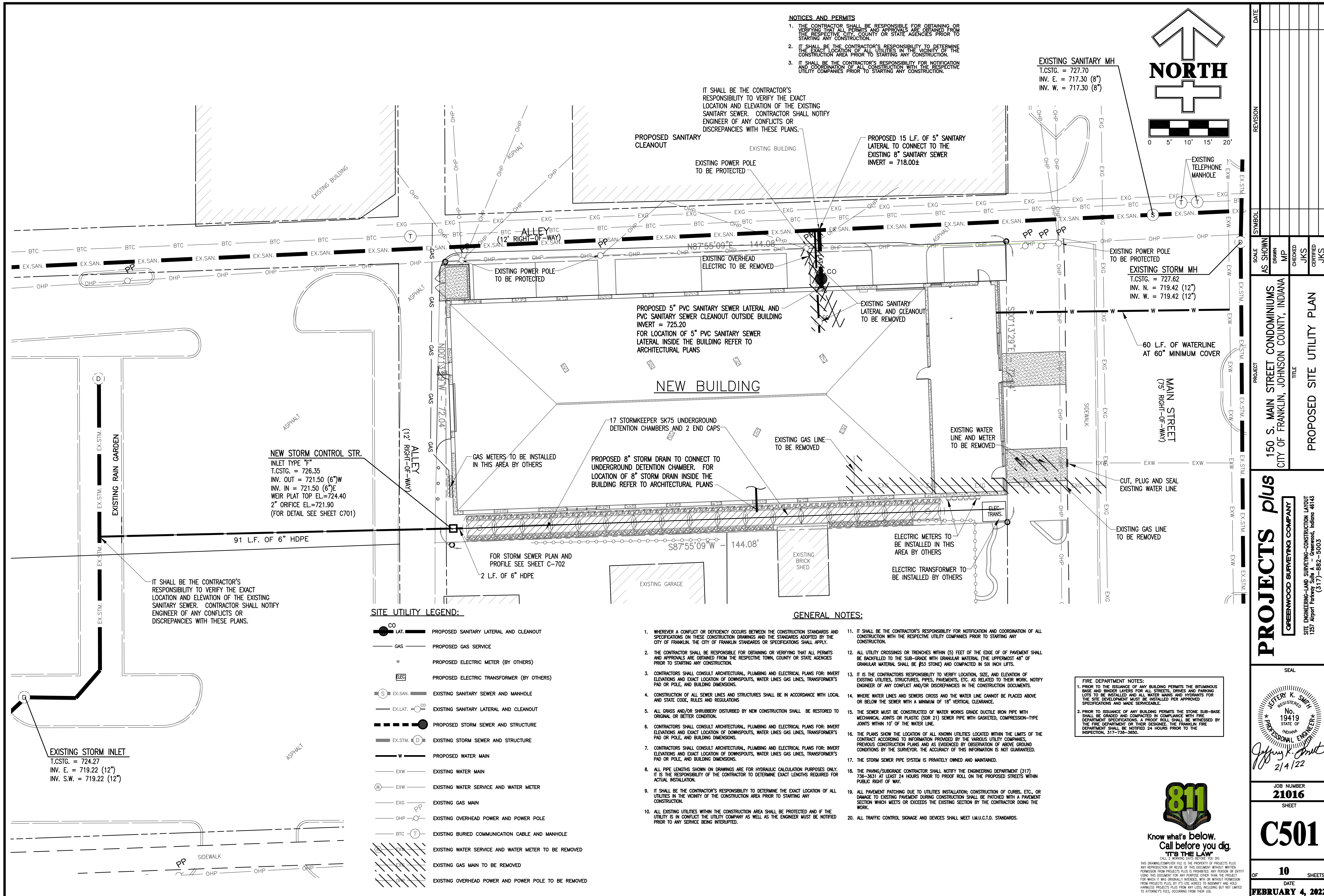
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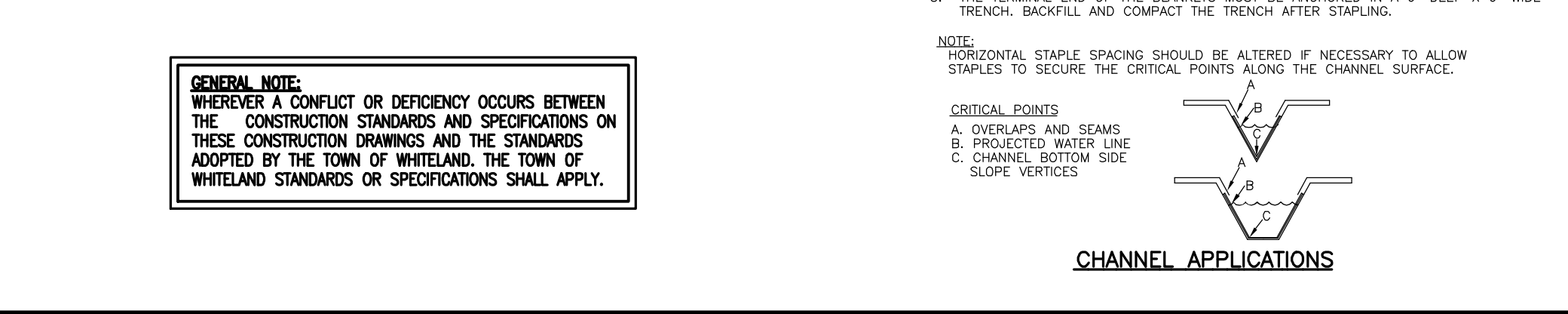
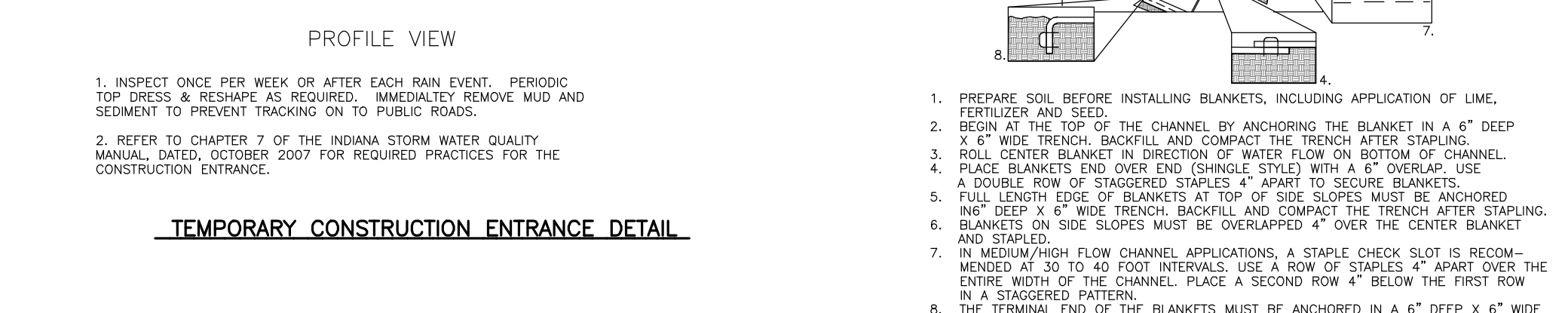
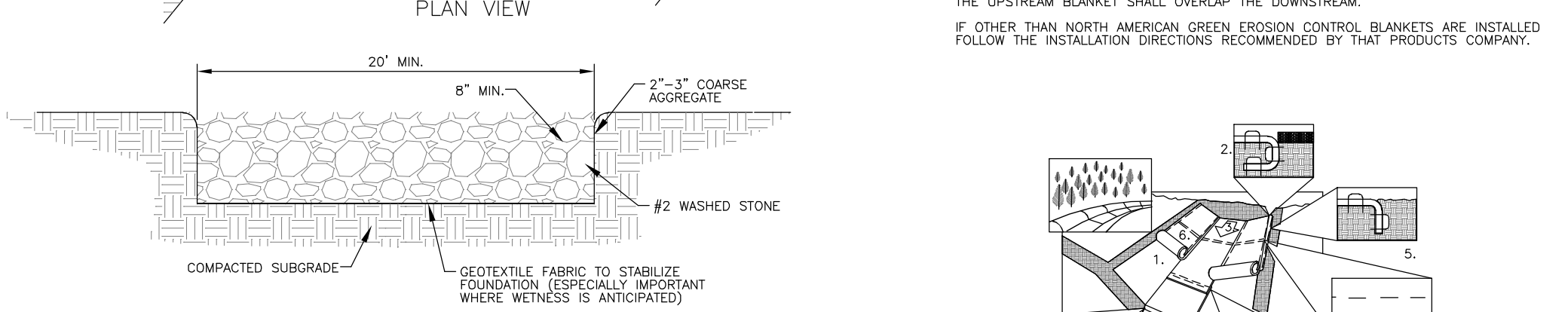
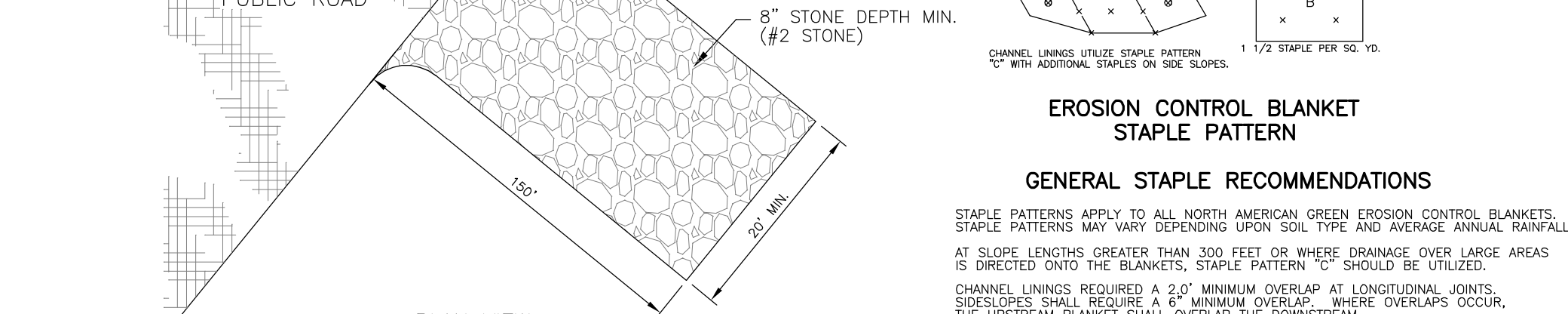
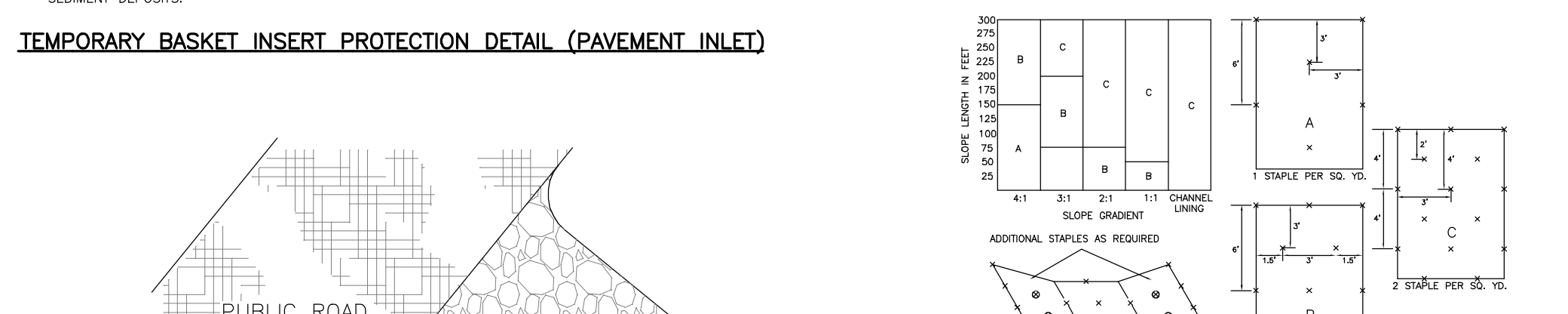
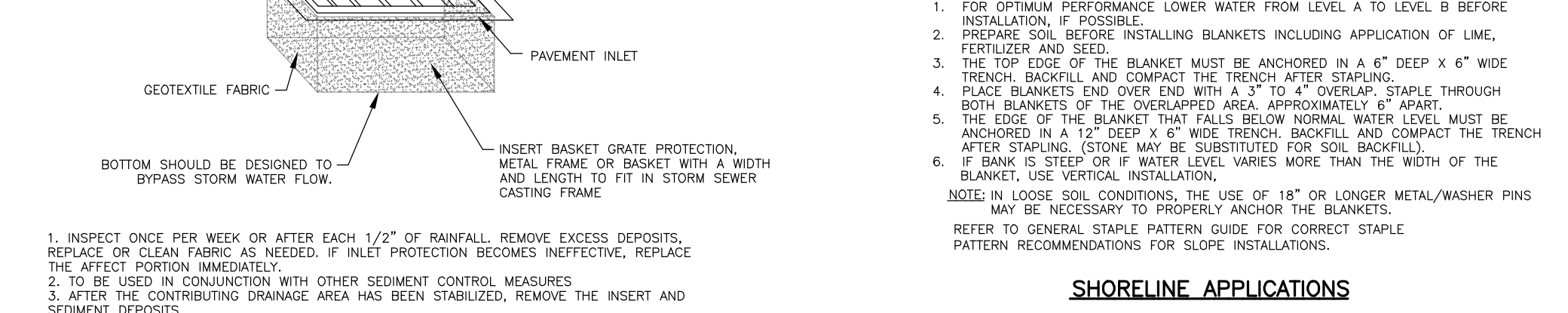
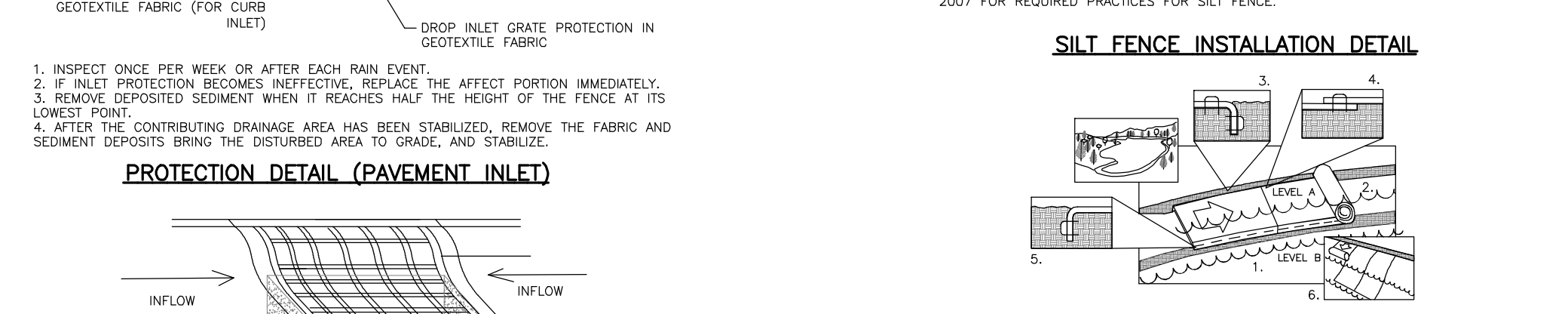
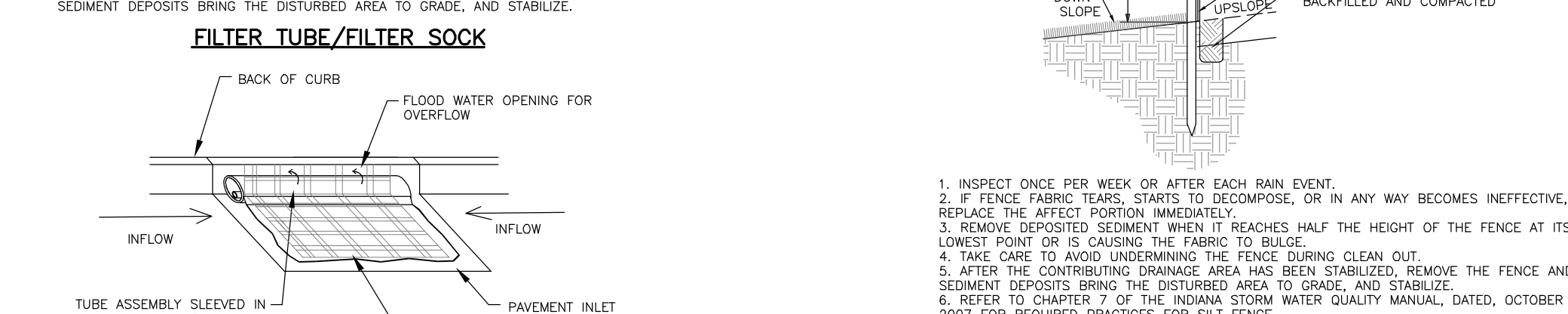
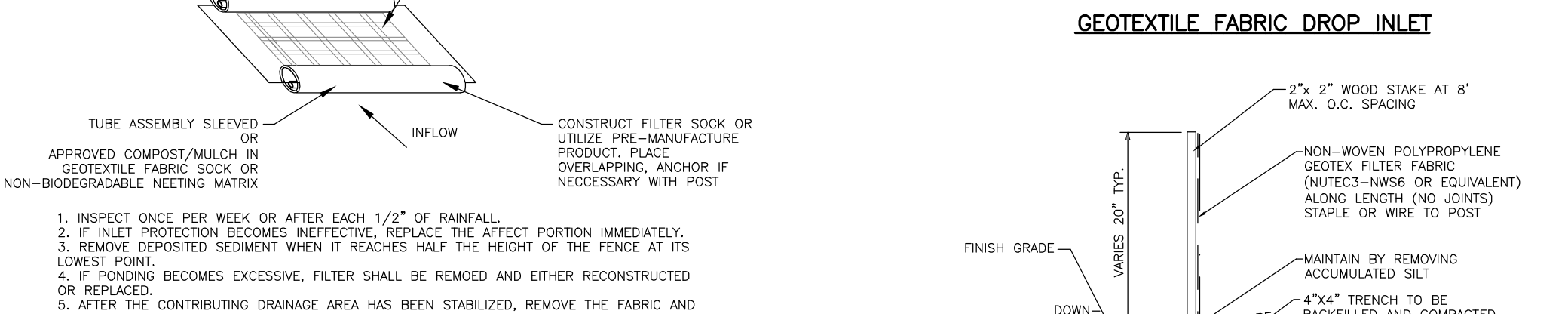
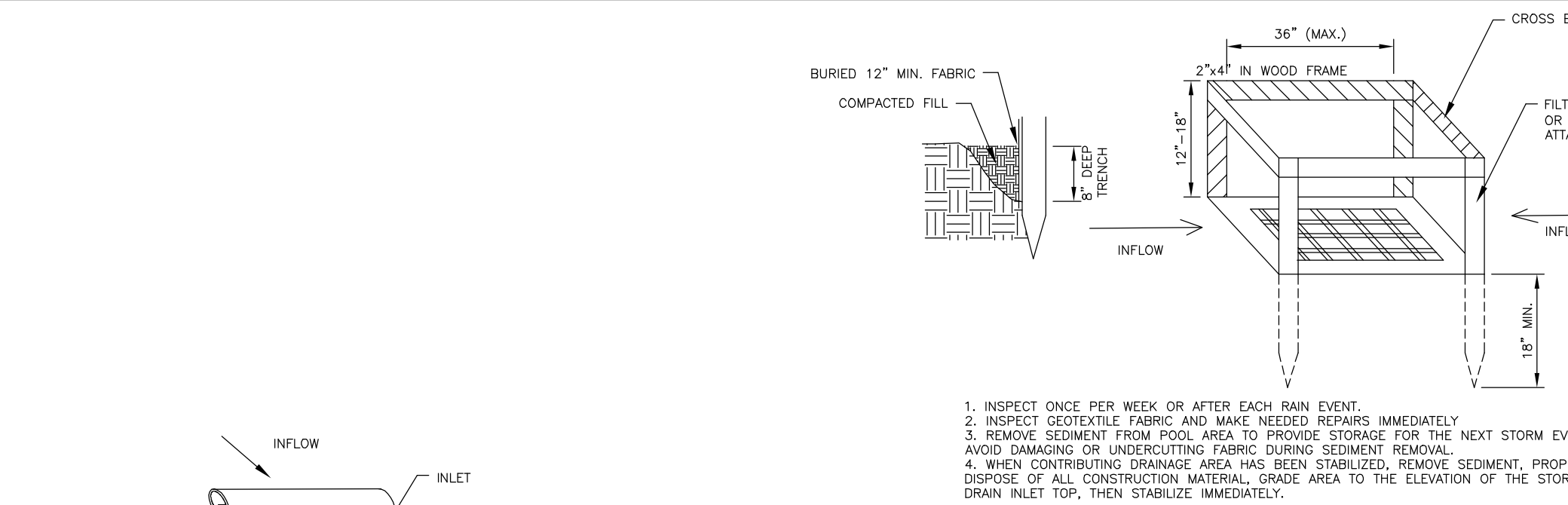
Know what's below.
Call before you dig.
IT'S THE LAW
CALL 2 WORKING DAYS BEFORE YOU DIG

DATE	
REVISION	
SYMBOL	
SCALE	AS SHOWN
PROJECT	150 S. MAIN STREET CONDOMINIUMS CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA
TITLE	PROPOSED SITE CONDITIONS AND LANDSCAPING PLAN
PROJECT	PROJECTS <i>plus</i> GREENWOOD SURVEYING COMPANY SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway Suite A - Greenwood, Indiana 46143 (317)-882-5003
SEAL	
JOB NUMBER	21016
SHEET	C201
OF	10
SHEETS	
DATE	FEBRUARY 4, 2022



<h1>PROJECTS <i>plus</i></h1> <div> GREENWOOD SURVEYING COMPANY SITE ENGINEERING—LAND SURVEYING—CONSTRUCTION LAYOUT 1257 Airport Parkway Suite A -- Greenwood, Indiana 46143 (317)---882---5005 </div>		PROJECT		SCALE	SYMBOL	REVISION	DATE
		150 S. MAIN STREET CONDOMINIUMS CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA		AS SHOWN			
		TITLE		MP			
		PROPOSED SITE GRADING PLAN		CHECKED			
				JKS			
				CERTIFIED			
				JKS			





SECTION 2 - MATERIAL HANDLING AND SPILL PREVENTION PLAN

MATERIAL HANDLING AND SPILL PREVENTION PLAN

IN ORDER TO MINIMIZE THE RELEASE OF POTENTIAL POLLUTANTS DURING CONSTRUCTION THE CONTRACTORS SHALL IMPLEMENT THIS MATERIAL HANDLING AND SPILL PREVENTION PLAN. THE CONTRACTOR SHALL REVIEW THIS PLAN WITH ALL SUBCONTRACTORS AND REQUIRE THAT THEY IMPLEMENT THE PLAN AS WELL.

1. CONSTRUCTION EQUIPMENT

A. FUELING, LUBRICATION AND FLUIDS: ALL OPERATIONS INVOLVING THE ADDITION OF FLUIDS TO EQUIPMENT SHOULD BE DONE IN ONE LOCATION, AS DESIGNATED BY THE GENERAL CONTRACTOR, OR DEVELOPER/OWNER, SO THAT SPILLS ARE LIMITED TO ONE LOCATION ON THE SITE, WHICH WILL FACILITATE THE CLEANUP OF SPILLS. IF AN ONSITE-FUELING TANK IS PLANNED TO BE ON SITE, IT SHALL BE DOUBLE WALLED AND STORED IN THIS DESIGNATED AREA. THIS LOCATION IS AN AREA THAT WILL NOT ALLOW SPILLED FLUIDS TO MIGRATE INTO SUBSURFACE SOILS. IN THE EVENT OF A SPILL, THE FLUID SHALL IMMEDIATELY BE CLEANED UP BY REMOVING THE CONTAMINATED SOIL OR STONE, WHICH SHALL BE DISPOSED OF IN AN ACCEPTABLE MANNER. SPILLS ON HARD SURFACES SHALL BE SOUPED UP BY AN ACCEPTABLE MATERIAL SUCH AS OIL DRY AND THE ABSORBENT MATERIAL DISPOSED OF IN A PROPER MANNER. THE SPILL SHALL ALSO BE REPORTED IMMEDIATELY TO THE CONTRACTOR'S SUPERVISOR.

B. EQUIPMENT REPAIR, ESPECIALLY WHEN FLUIDS MUST BE REMOVED FROM THE EQUIPMENT OR THE POSSIBILITY OF FLUID SPILLS IS HIGH SHOULD ALWAYS BE DONE OFFSITE AT A FACILITY THAT IS MORE SUITABLE THAN A CONSTRUCTION SITE TO HANDLE SPILLS. WHEN EQUIPMENT MUST BE REPAIRED ON-SITE IT SHOULD BE MOVED TO THE MAINTENANCE AND FUELING AREA IF POSSIBLE. OTHERWISE, SUITABLE ON SITE CONTAINERS SHOULD BE PLACED UNDER THE EQUIPMENT DURING REPAIR TO CATCH ANY SPILLED FLUIDS AND THESE FLUIDS SHOULD BE DISPOSED OF IN A PROPER MANNER.

C. ALL REUSABLE FLUID CONTAINERS, SUCH AS GASOLINE CANS, SHALL BE INSPECTED FOR LEAKS EACH TIME THEY ARE USED. IF LEAKS ARE FOUND, THE FLUID SHALL BE REMOVED FROM THE CONTAINER IN A PROPER MANNER AND THE CONTAINER DISPOSED OF IN AN ACCEPTABLE MANNER. EMPTY DISPOSABLE CONTAINER, SUCH AS GREASE TUBES AND LUBRICATING OIL AND BRAKE FLUID CONTAINERS, SHALL BE DISPOSED OF IN A PROPER MANNER AND SHALL NOT BE LEFT ON THE GROUND OR IN THE OPEN ON THE CONSTRUCTION SITE.

2. CONSTRUCTION MATERIALS

A. EROSION CONTROL MEASURE SHOWN ON THE SUBJECT PROJECT SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION IN A MANNER SUFFICIENT TO MINIMIZE SOIL EROSION. EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ELSEWHERE ON THE PLANS. EXCESSIVE DUSTING OF SOIL ON THE SITE SHALL BE MINIMIZED BY REDUCING CONSTRUCTION TRAFFIC ACROSS BARE SOIL DURING DRY AND/OR WINDY WEATHER, AND BY APPLYING WATER OR OTHER ACCEPTABLE DUST CONTROL MEASURES TO THE SOIL. UPON COMPLETION OF CONSTRUCTION AND SUITABLE ESTABLISHMENT OF PERMANENT VEGETATION, TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, CHECK DAMS AND INLET PROTECTION DEVICES SHALL BE REMOVED IN A MANNER TO MINIMIZE ADDITIONAL LAND DISTURBANCE. ANY AREAS DISTURBED BY THESE OPERATIONS SHALL BE PROPERLY REVEGETATED.

B. LARGE WASTE MATERIALS CREATED BY CUTTING, SAWING, DRILLING, OR OTHER OPERATIONS SHALL BE PROPERLY DISPOSED OF IN SUITABLE WASTE CONTAINERS. THE SITE SHALL BE CHECKED AT THE END OF THE DAY AS A MINIMUM, AND ALL WASTE MATERIALS, INCLUDING THOSE BLOWN ACROSS OR OFF THE SITE INTO ADJACENT AREAS, SHALL BE REMOVED FROM THE SITE. WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AS SAVING THAT CREATE SMALL PARTICLES SHOULD BE PERFORMED IN ONE SPOT IN AN AREA PROTECTED FROM WIND, AND WASTE PARTICLES COLLECTED AND DISPOSED OF FREQUENTLY TO MINIMIZE WIND DISPERSAL.

C. PACKAGING USED TO TRANSPORT MATERIALS TO THE SITE FOR CONSTRUCTION OF THE FACILITY SHALL BE DISPOSED OF PROPERLY. WHETHER THE MATERIAL IS SHOWN OUT OF ITS PACKAGING OR NOT, IT SHALL BE INCORPORATED INTO THE PROJECT IMMEDIATELY OR STORED DUSTS FOR FUTURE USE. PACKAGED MATERIALS STORED ON-SITE SHALL BE INSPECTED REGULARLY AND ANY LOOSE PACKAGING SHALL BE REPAIRED OR DISPOSED OF PROPERLY.

D. ALL DEMATERING OF ACTIVITIES SHALL BE DONE IN ACCORDANCE TO GOOD EROSION CONTROL PRACTICES. THESE PRACTICES SHOULD INCLUDE THE USE OF DIRT BAGS SUCH AS DANDY DIRT BAGS, THE USE OF THESE TYPES OF DEMATERING DEVICES WILL REMOVE LARGE QUANTITIES OF SILT, SEDIMENT, AND DIRT AND PREVENT THESE MATERIALS TO ENTER THE STORM SEWER SYSTEM.

E. IF THE USE OF LIME IS USED TO STABILIZE THE SOIL OF THE SITE THEN ALL CONSTRUCTION EQUIPMENT USED SHALL BE CLEANED OF ALL EXCESS MATERIAL WITH WATER IN THE MAINTENANCE AND FUELING AREA AS SHOWN WITHIN THESE PLANS.

F. NUTRIENTS AND FERTILIZERS SHALL ONLY BE USED TO ESTABLISH RAPID VEGETATION. WHEN THESE PRODUCTS ARE UTILIZED, THE USER SHOULD PAY STRICT ATTENTION TO THE PRODUCTS RECOMMENDED USAGE.

3. CONCRETE WASTE WATER

A. ALL CONCRETE WASTE WATER SHALL BE DISPOSED OF IN THE DESIGNATED AREA AS DIRECTED BY THE GENERAL CONTRACTOR OR DEVELOPER/OWNER. THIS AREA IS TO BE A 3' DEEP, 10' SQUARE PIT AS DETAILED ON THE EROSION CONTROL PLAN. THIS AREA SHALL BE INSPECTED ON A DAILY BASIS AT A MINIMUM. WHEN THIS AREA BECOMES FULL, THE POLLUTANTS SHALL BE EXCAVATED, PLACED IN AN ACCEPTABLE CONTAINER AND DISPOSED OF IN A PROPER MANNER.

B. PAINT PRODUCTS

A. ALL EXCESS PAINT AND THEIR RELATED PRODUCTS SHALL BE DISPOSED OF IN THE MANNER AT WHICH THE MANUFACTURER SUGGESTS. UNDER NO CIRCUMSTANCES WILL PAINT OR THEIR RELATED PRODUCTS BE CLEANED OR DISPOSED OF IN SOIL. SANITARY SEWERS, STORM SEWERS OR DETENTION BASINS. ANY VIOLATION OF THIS SHALL BE REPORTED TO THE JOB SUPERINTENDENT.

IN THE EVENT OF ACCIDENTALLY CONTAMINATION ALL EFFORTS SHOULD BE MADE TO REMOVE CONTAMINANTS IN AN APPROPRIATE MANNER. THE JOHNSON COUNTY FIRE DEPARTMENT SHOULD BE CONTACTED IMMEDIATELY TO DETERMINE IF FURTHER MEASURES ARE NEEDED.

TEMPORARY SEEDING DATES:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE												
OATS												
ANNUAL RYEGRASS												

PERMANENT SEEDING DATES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NON-IRRIGATED2												
IRRIGATED												
DORMAT SEEDING22												

IRRIGATION NEEDED DURING THIS PERIOD, TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREAS, USE MULCH

- LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.
- INCREASE SEEDING APPLICATION BY 50%

SEEDING SCHEDULE

FIGURE 5-3

KIND OF SEED	1000 SQ.FT.	ACRE	REMARKS
WHEAT OR RYE	3.5 LBS.	2 BU.	COVER SEED 1" TO 1-1/2" DEEP
SPRING OATS	2.3 LBS.	3 BU.	COVER SEED TO 1" DEEP
ANNUAL RYEGRASS	1.5 LBS.	40 LBS.	COVER SEED TO 1/4" DEEP

* NOT NECESSARY WHERE MULCH IS APPLIED.

CONCRETE WASHOUT DETAIL

1. INSPECT ONCE PER WEEK OR AFTER EACH RAIN EVENT. CHECK FOR LEAKS AND SPILLS. REPAIR OR REPLACE ANY FAILING PORTION OF THE WASHOUT PIT. WASHOUT PIT TO BE REMOVED ONCE SYSTEM REACHES 50% OF DESIGNED CAPACITY.

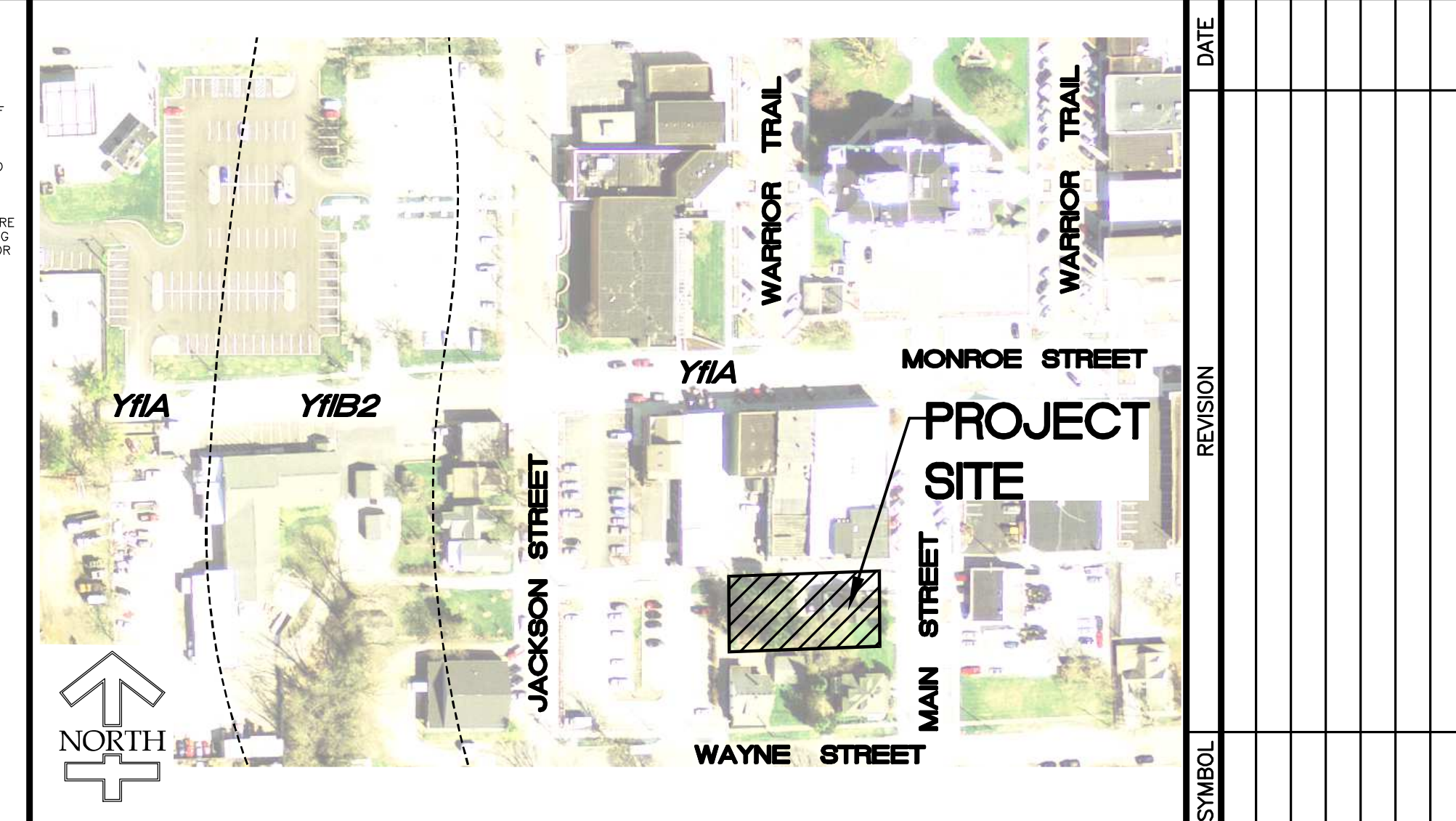
2. REFER TO CHAPTER 7 OF THE INDIANA STORM WATER QUALITY MANUAL, DATED, OCTOBER 2007 FOR REQUIRED PRACTICES FOR CONCRETE WASHOUTS

SECTION 2 - EMERGENCY RESPONSE NUMBERS

EMERGENCY RESPONSE TO ANY LIFE THREATENING PROBLEM	911
WHITELAND VOLUNTEER FIRE DEPARTMENT	317-535-8280
WHITELAND POLICE DEPARTMENT	317-535-8100
INDIANA DEPARTMENT OF NATURAL RESOURCES	812-477-8773
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	317-233-7745
JOHNSON COUNTY SOIL AND WATER	317-342-5594

THIS PLAN TO BE USED FOR EROSION CONTROL PURPOSES ONLY. THE CITY/COUNTY ENGINEER HAS THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IN THE FIELD AS CONDITIONS WARRANT.

ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL, DATED OCTOBER 2007, BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM).



EROSION CONTROL REQUIREMENTS FOR COMPLIANCE WITH IDEM GENERAL PERMITS RULES FOR STORM WATER RUNOFF FROM CONSTRUCTION SITES

1. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL, DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM).

2. THE EROSION CONTROL MEASURES INCLUDED IN THIS PLAN SHALL BE INSTALLED PRIOR TO INITIAL LAND DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICABLE. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING AND MAINTAINING SILT FENCE, STRAW BALES, SEDIMENT BASINS, ETC. AS SHOWN UPON THIS PLAN. IF SHOWN ON THIS PLAN, EROSION-CONTROL DEVICES OR EROSION CONTROL AT THE OUTFALL OF THE STORM SEWER SYSTEM SHALL BE INSTALLED AT THE TIME OF THE CONSTRUCTION OF THE OUTFALL. THE PROPOSED DETENTION BASIN SHALL BE UTILIZED AS A SEDIMENT BASIN DURING CONSTRUCTION FOR AS LONG AS PRACTICAL.

3. ALL ON-SITE STORM DRAIN INLETS SHALL BE PROTECTED AGAINST SEDIMENTATION WITH FILTER FABRIC, OR EQUIVALENT BARRIERS AS SHOWN ON THIS PLAN.

EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS OR OTHER CIRCUMSTANCES BEYOND THE CONTROL OF THE CONTRACTOR / DEVELOPER APPROPRIATE EROSION CONTROL PRACTICES WILL BE INITIATED WITHIN (7) SEVEN DAYS OF THE LAST LAND DISTURBING ACTIVITY AT THE SITE. THE SITE SHALL BE STABILIZED BY SEEDING, SOODING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES.

4. ESTABLISH AND EVALUATE PROJECT ACTION SUPERINTENDENT WHOM WILL BE IN CHARGE OF OVERSEEING EROSION ACTIVITIES.

5. THE EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF A QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL AND FOLLOWING THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.

6. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL SEDIMENT BASINS AND OTHER EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF REQUIRED MAINTENANCE RESPONSIBILITIES WITH THE OWNER.

7. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEARED OF ACCUMULATED SEDIMENT. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION.

8. THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE. WASTE SHALL BE REMOVED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNCLEANED BUILDING MATERIALS APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED.

CONSTRUCTION PHASE	CONSTRUCTION SCHEDULE CONSIDERATIONS	MONITORING AND MAINTENANCE SCHEDULE	CONSTRUCTION START DATE (APPROX. DATE)
PRE-CONSTRUCTION ACTIONS (EVALUATION/PROTECTION OF IMPORTANT SITE CHARACTERISTICS)	PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, CONTRACTOR TO HAVE PRE-CONSTRUCTION MEETING WITH CITY OFFICIALS (IF REQUIRED) BEFORE CONSTRUCTION, EVALUATE, MARK, AND PREPARE THE SEDIMENT TO A SEDIMENT DETENTION BASIN. UNIQUE AREAS (e.g., WETLANDS) TO BE PROTECTED. ON-SITE SEPTIC SYSTEM ABSORPTION RISKS, AND VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN PERMETER AREAS.	ESTABLISH AND EVALUATE PROJECT ACTION SUPERINTENDENT WHOM WILL BE IN CHARGE OF OVERSEEING EROSION ACTIVITIES.	WEEK OF (LASTING APPROX. 1 WEEK)
CONSTRUCTION ACCESS (CONSTRUCTION ENTRANCES, CONSTRUCTION ROUTES, EQUIPMENT PARKING AREAS)	STABILIZE BARE AREAS IMMEDIATELY WITH GRASS, AND TEMPORARY VEGETATION PRIOR TO COMMENCING WORK.	INSPECT CONSTRUCTION ENTRANCE WEEKLY AND AFTER EACH 1/2" RAIN EVENT, INCLUDING REMOVAL OF IMMEDIATELY SEDIMENTS BY SHEEPING OR BROOMING. IF FLUSHING PROVIDE ADEQUATE SEDIMENT TRAPS FOR WATER CONVEYANCE.	WEEK OF (LASTING APPROX. 1 WEEK)
SEDIMENT BARRIERS AND TRAPS (SEDIMENT BASINS, SILT FENCES, OUTLET PROTECTION)	INSTALL PRINCIPAL BASINS AFTER CONSTRUCTION SITE IS ASSESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING. CONSTRUCT DETENTION BASINS AFTER CONSTRUCTED, INSTALL PERMETER SNALES.	INSPECT THE FABRIC BARRIER WEEKLY AND AFTER EACH 1/2" RAIN EVENT, AND MAKE NEEDED REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE POOL AREA TO PROVIDE STORAGE FOR THE STORM OR DRAINAGE OR UNCLEANED BUILDING MATERIALS. SEDIMENT REMOVAL.	WEEK OF (LASTING APPROX. 1 WEEK)
RUNOFF CONTROL (OVERSPILLS, PERMETER DIKES, WATER BARS, OUTLET PROTECTION)	INSTALL PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS ARE INSTALLED BUT BEFORE SITE GRADING. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING. CONSTRUCT DETENTION BASINS AFTER CONSTRUCTED, INSTALL PERMETER SNALES.	INSPECT THE SEDIMENT BASIN WEEKLY AND AFTER EACH 1/2" RAIN EVENT, INCLUDING REMOVAL OF IMMEDIATELY SEDIMENTS BY SHEEPING OR BROOMING. IF FLUSHING PROVIDE ADEQUATE SEDIMENT TRAPS FOR WATER CONVEYANCE. PERIODICALLY CHECK THE EMBANKMENT, EMERGENCY SPILLWAY, AND OUTLET FOR EROSION DAMAGE, PILING, SETTLING, SEDIMENT, OR SLUMPING ALONG THE TOE OR AROUND THE BARREL, AND REPAIR IMMEDIATELY. REMOVE TRASH AND OTHER DEBRIS FROM THE RISER, EMERGENCY SPILLWAY, AND POOL AREA. CLEAN OR REPLACE THE GRAVEL AROUND THE RISER IF THE SEDIMENT POOL DOES NOT DRAIN PROPERLY.	WEEK OF (LASTING APPROX. 1 WEEK)
RUNOFF CONVEYANCE SYSTEMS (STABILIZED STREAMBEDS, STORM SEWER DRAINS, INLETS AND OUTLET PROTECTION, OPEN CHANNELS)	WHERE NECESSARY, STABILIZE STREAMBEDS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL PERMETER SNALES BY SYSTEM AFTER GRADING.	REPLACE THE SIGN AFTER THE DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, INSPECTED, AND APPROVED. DO SO BY DRAINING ANY WATER, REMOVAL OF THE SEDIMENT TO A SEDIMENT DETENTION BASIN, SMOOTHING THE SITE TO BLEND WITH THE SURROUNDING AREA, THEN STABILIZING. REPLACE SPILLWAY GRAVEL FACING IF CLOGGED. INSPECT VEGETATION, AND RE-SEED IF NECESSARY. CHECK THE SPILLWAY DEPTH PERIODICALLY TO ENSURE A MINIMUM OF 1 1/2'-T. DEPTH FROM THE LOWEST POINT OF THE SETTLED EMBANKMENT TO HIGHEST POINT OF THE SPILLWAY CREST, AND FILL ANY LOW AREAS TO MAINTAIN DESIGN ELEVATION.	WEEK OF (LASTING APPROX. 4 WEEKS)
LAND CLEARING AND GRADING (CUTTING/FILLING, GRADING DRAINS, SEDIMENT TRAPS, BARRIERS, OVERSPILLS, SURFACE ROOFING)	BEFORE MAJOR CLEARING AND GRADING AFTER INSTALLING THE KEY SEDIMENT AND RUNOFF MEASURES. CLEAR BARRIERS AND DETENTION AREAS AS NEEDED. INSTALL ADDITIONAL CONVEYANCE SYSTEMS AS GRADING PROGRESSES.	INSPECT NEWLY TOPSOILED AREAS WEEKLY UNTIL VEGETATION IS ESTABLISHED. REPAIR ERODED OR DAMAGED AREAS AND REVEGETATE.	WEEK OF (LASTING APPROX. 4 WEEKS)
SURFACE STABILIZATION (TEMPORARY AND PERMANENT SEEDING, MULCHING, SOODING, RIF-ROF)	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETED.	INSPECT WEEKLY AND ESPECIALLY AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE: VIGOROUS DARK GREEN OR BLUE-GREEN CHLOROPHYLL, MOISTURE CONDITION, AND MULCHING. THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER RE- PREPARING THE SEDIMENT.	WEEK OF (LASTING APPROX. 2 WEEKS)
LANDSCAPING AND FINAL STABILIZATION (TEMPORARY AND PERMANENT SEEDING, MULCHING, SOODING, RIF-ROF)	STABILIZE ALL OPEN AREAS INCLUDING BORROW AND SPILL AREAS. REMOVE TEMPORARY CONTROLS, MULCHES, BALE, OR SPREADS AS NEEDED. STABILIZE, PERMANENT SEED ALL BARE SOIL AREAS.	INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. REPAIR DAMAGED BALE, OR SPREADS AS NEEDED. BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING, AND MULCHING.	WEEK OF (LASTING APPROX. 2 WEEKS)

PROJECT

150 S. MAIN STREET CONDOMINIUMS

CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

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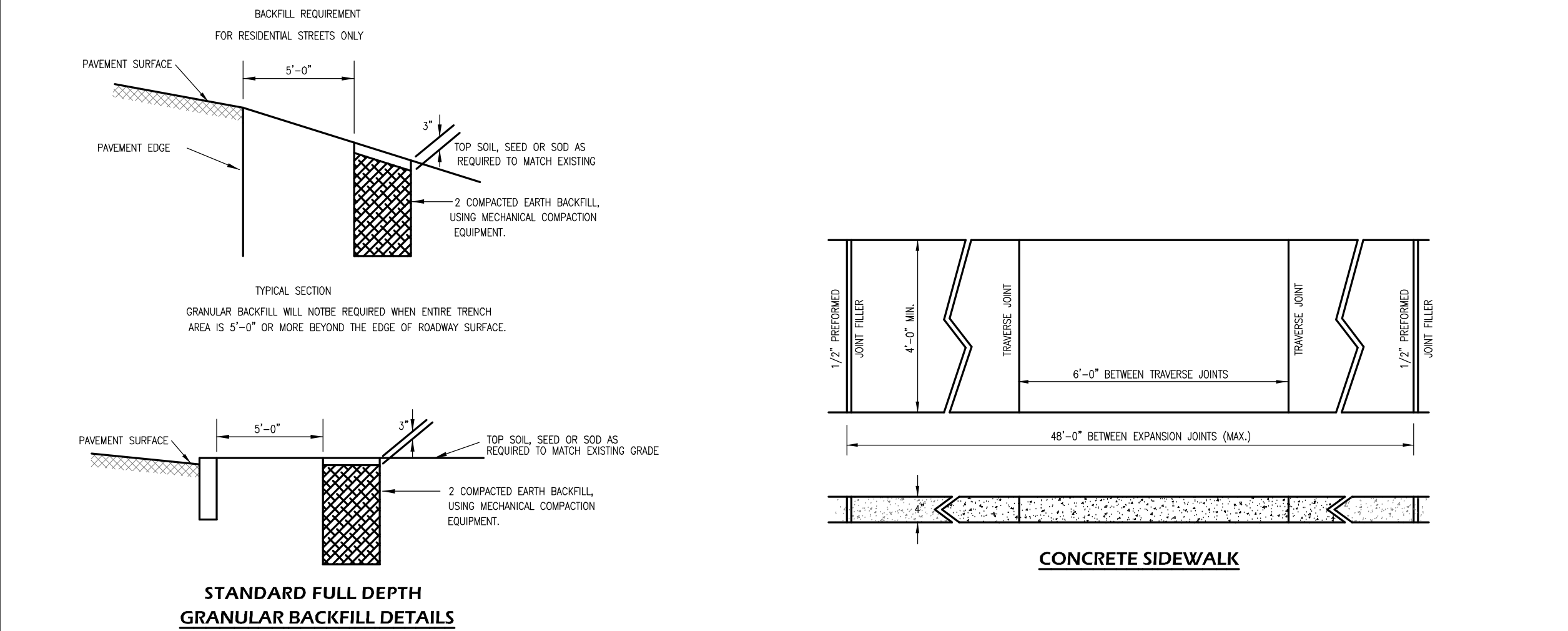
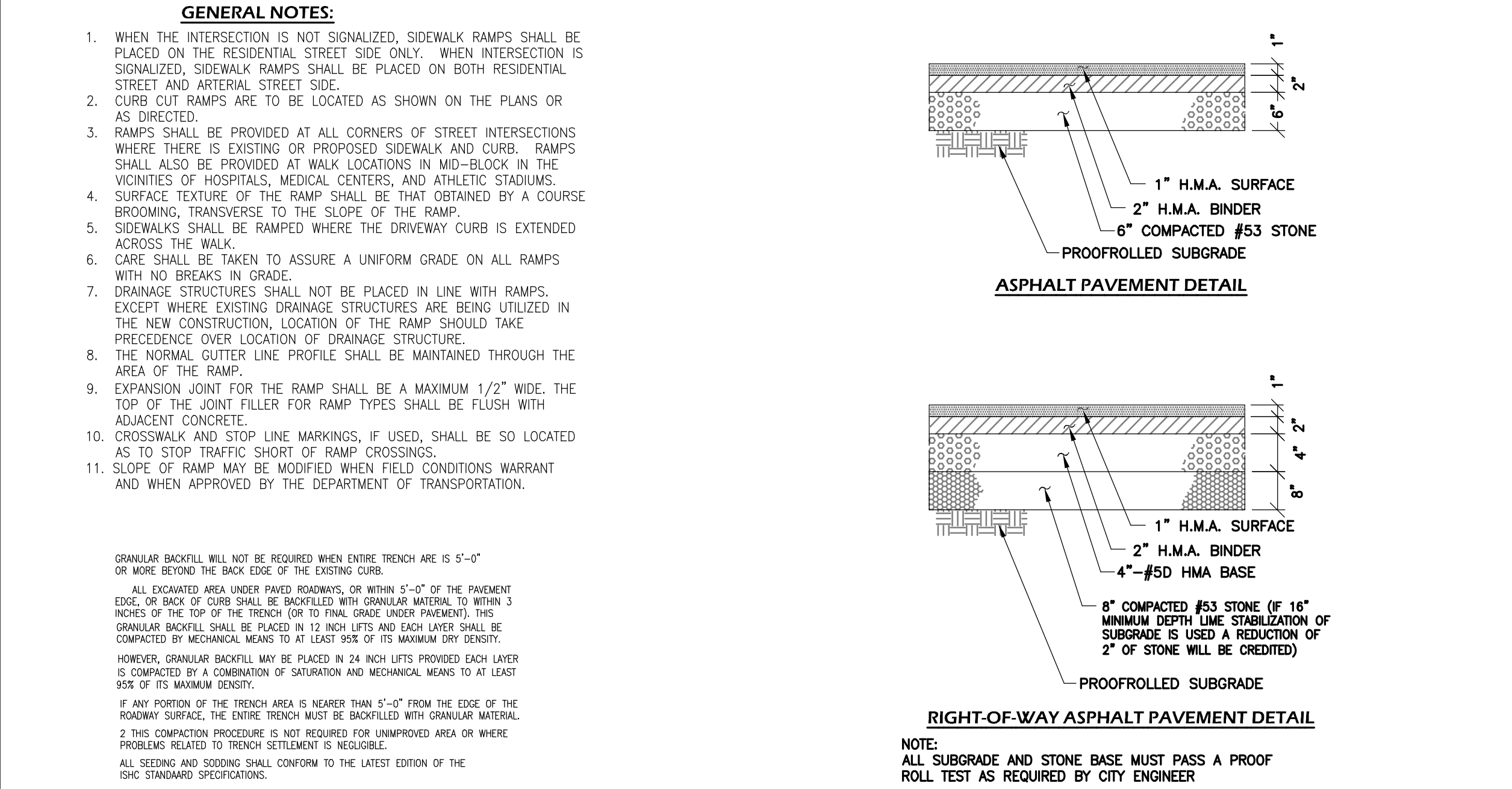
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CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

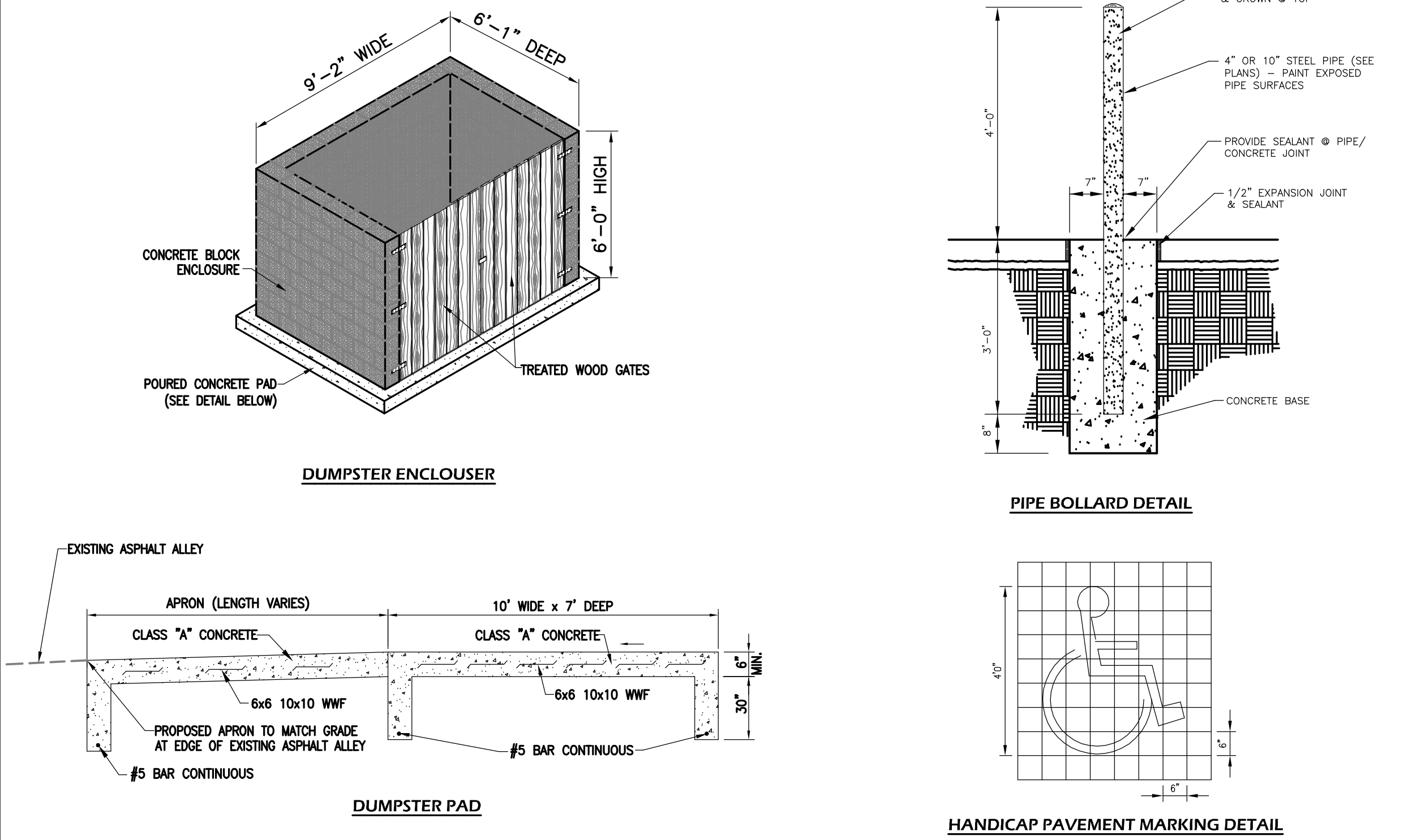
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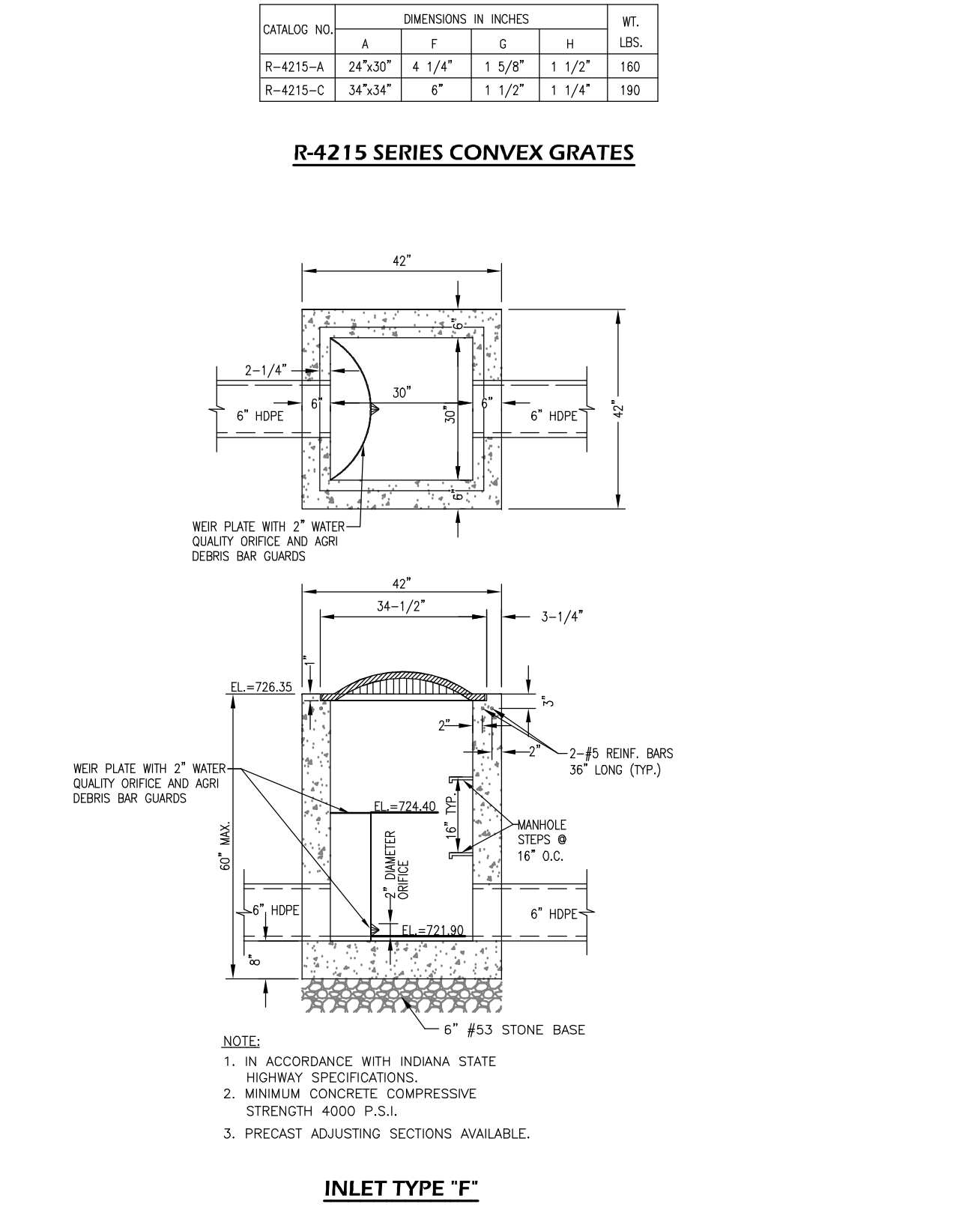
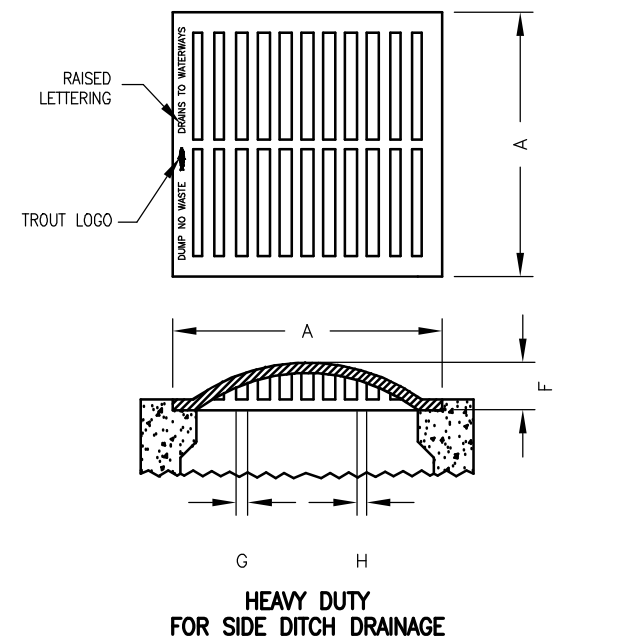
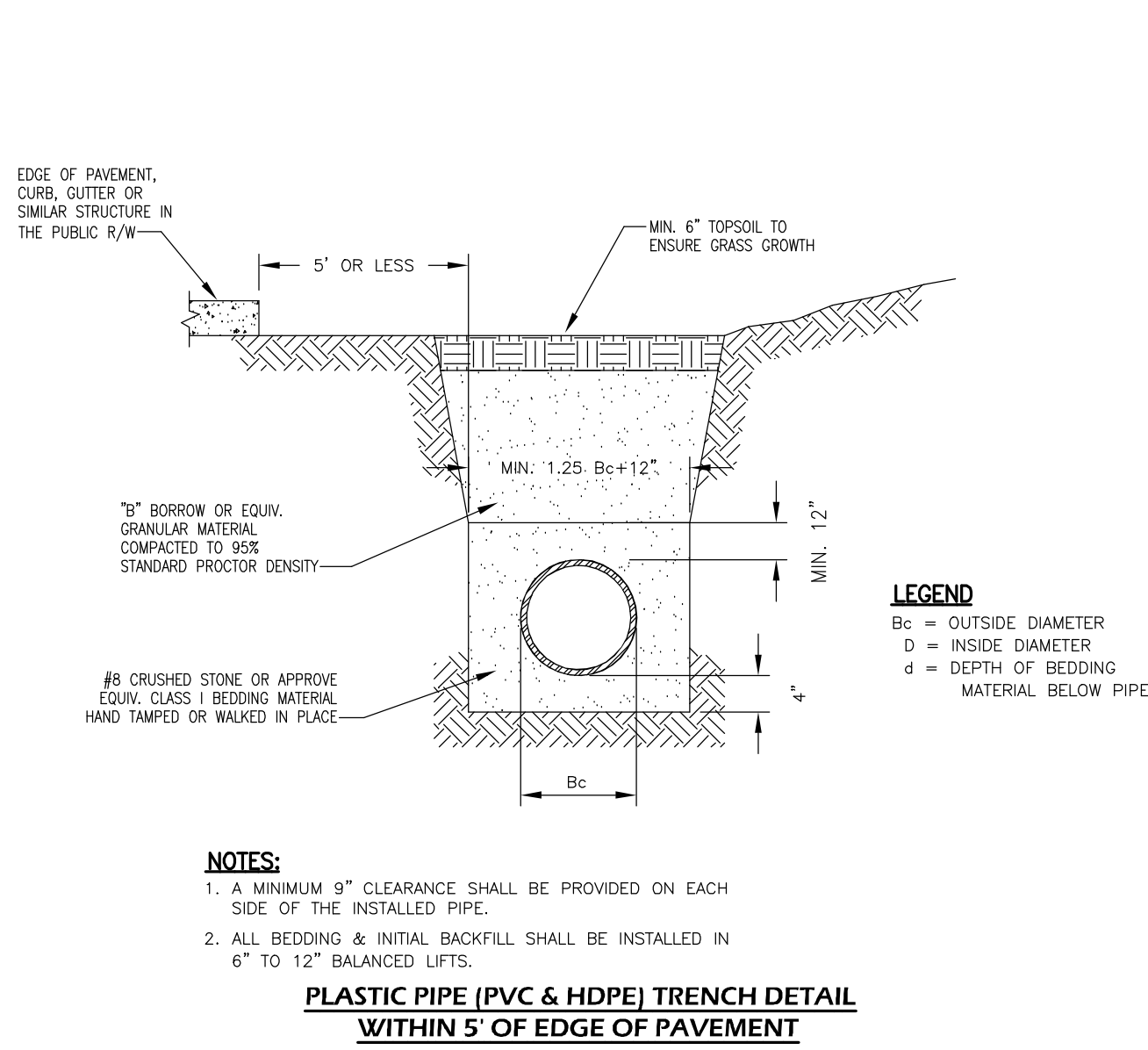
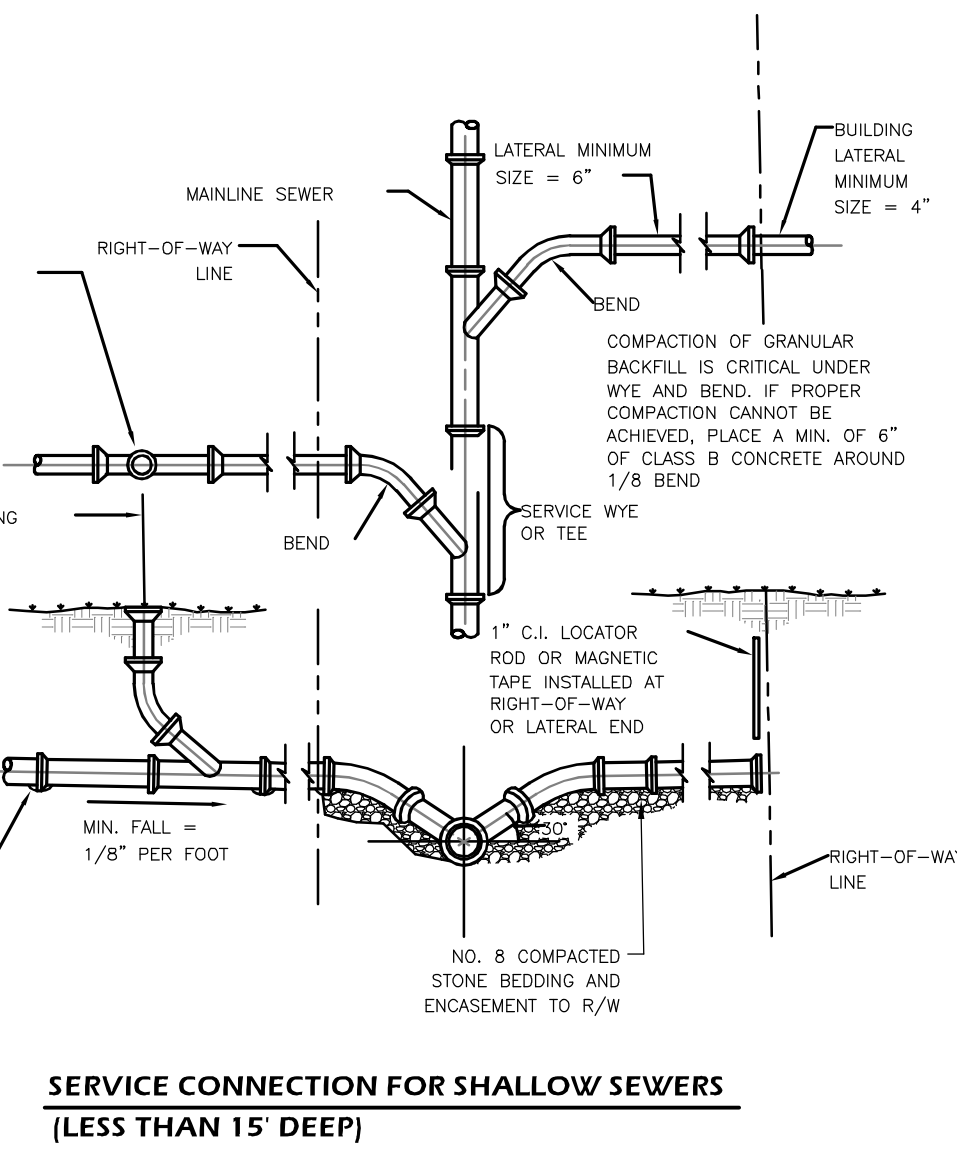
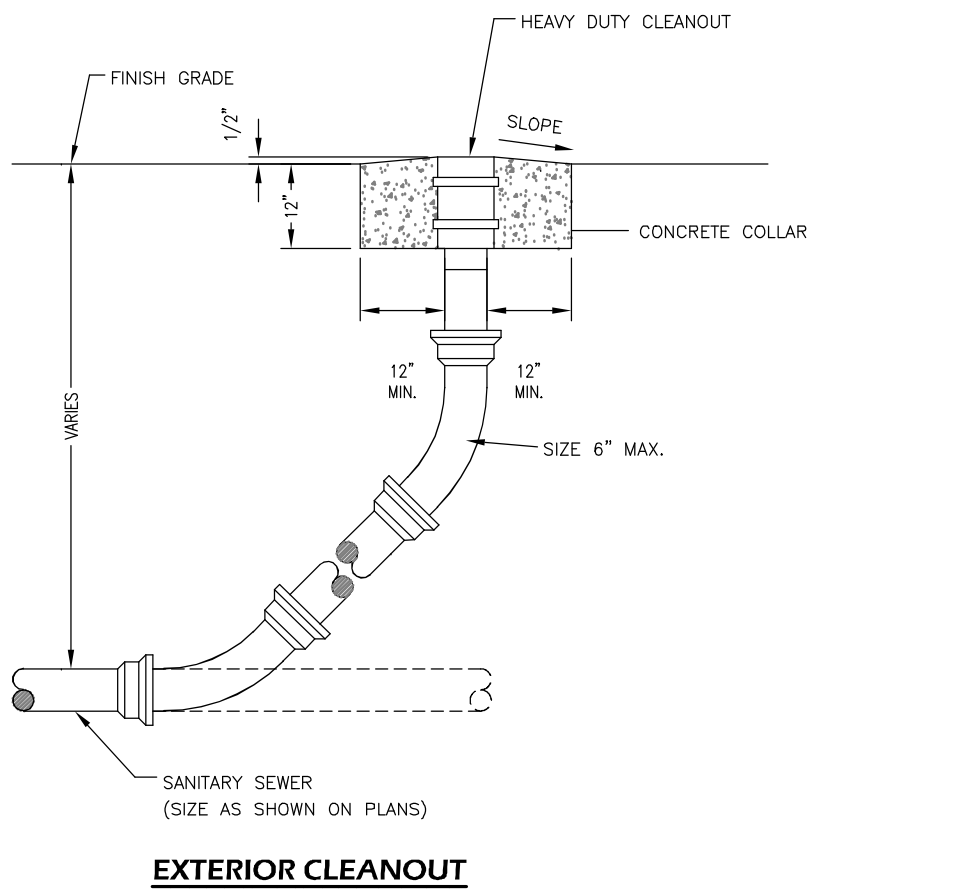
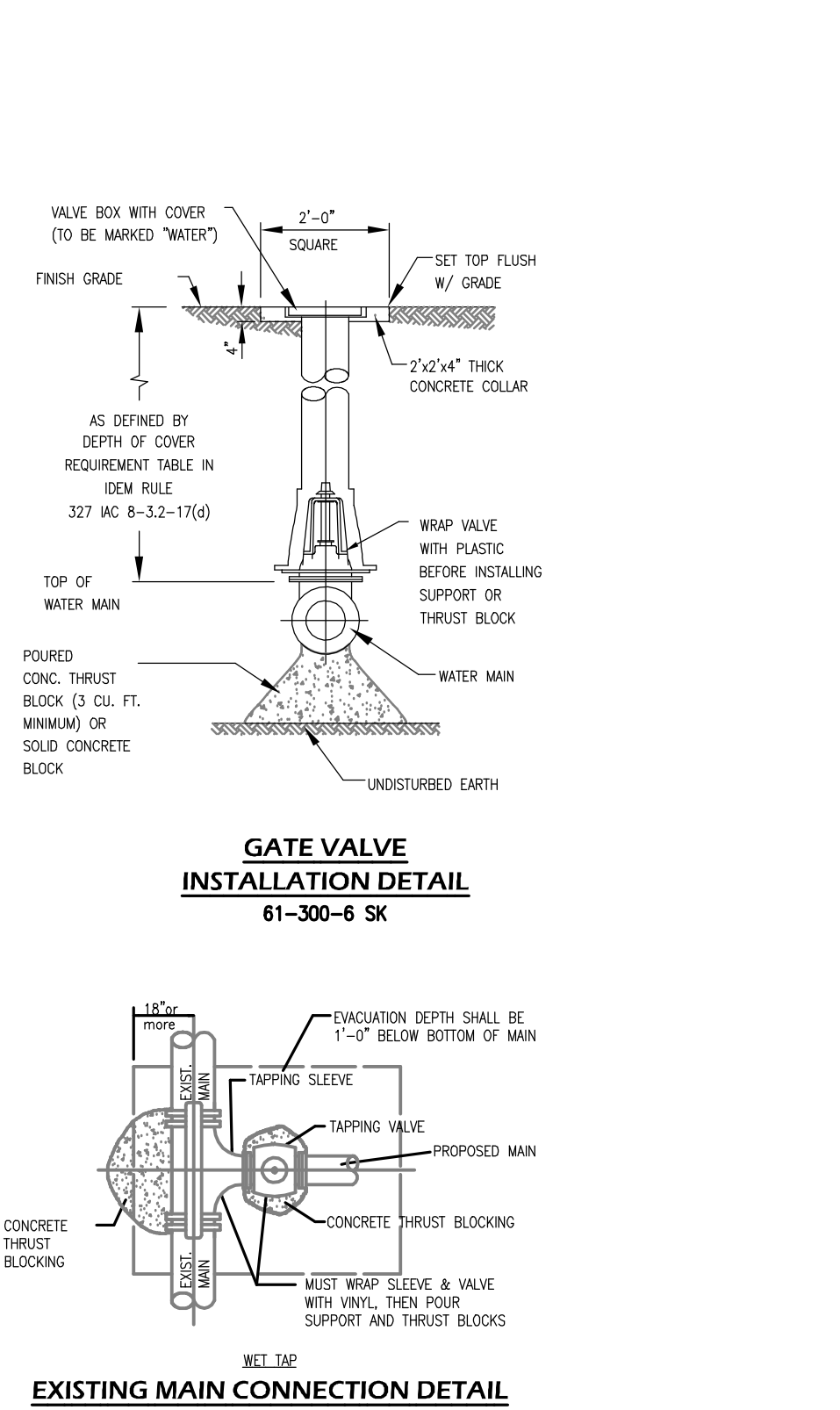
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STREET DETAILS



SITE DETAILS



DATE	REVISION	SYMBOL	SCALE	NONE	DRAW	MP	CHECKED	JKS	CERTIFIED	JKS

PROJECT	TITLE
150 S. MAIN STREET CONDOMINIUMS CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA	SITE DETAILS - STREET, SANITARY SEWER, STORM SEWER AND WATER

PROJECTS plus

GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway Suite A - Greenwood, Indiana 46143
(317)-862-5003

SEAL

JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER

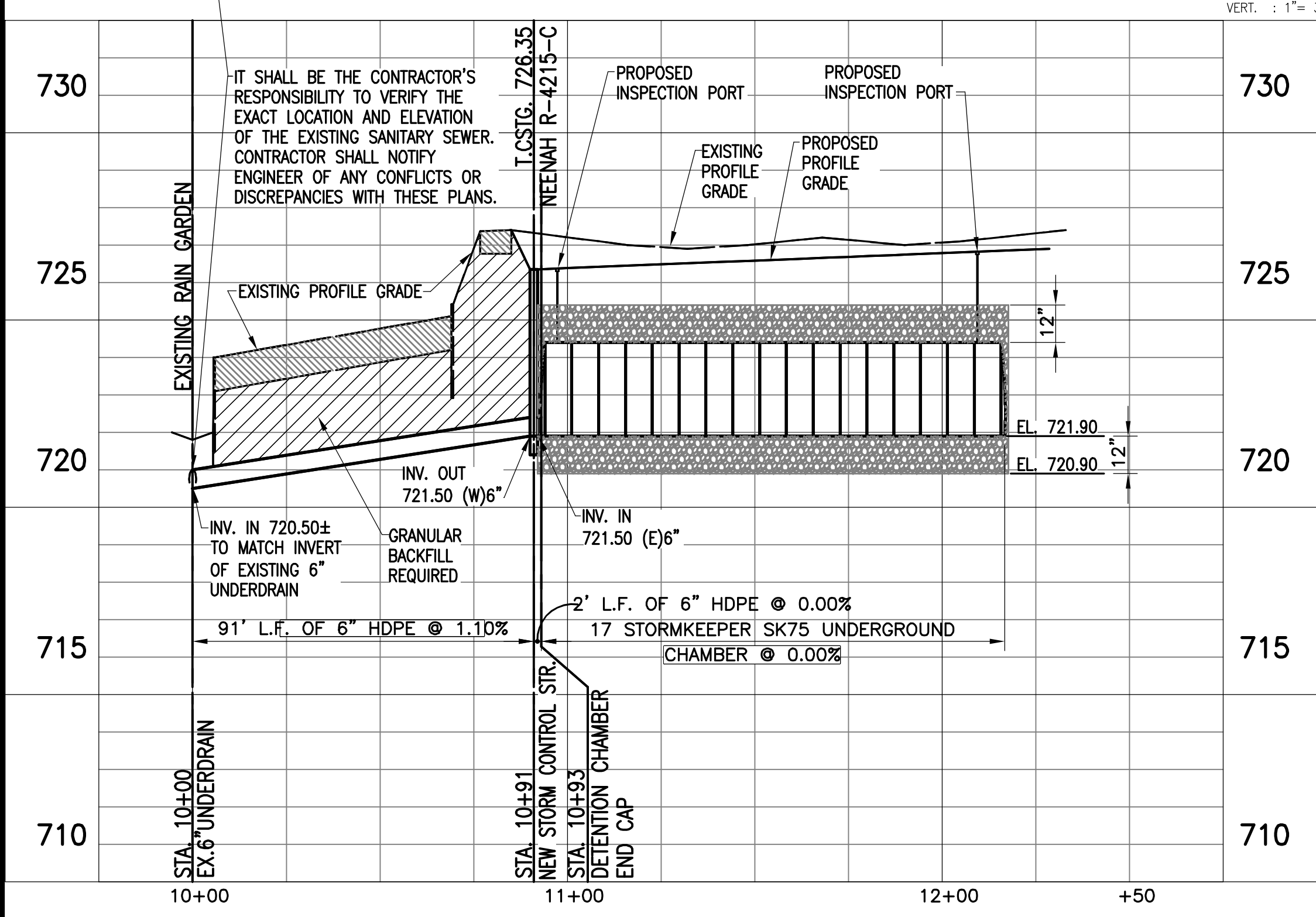
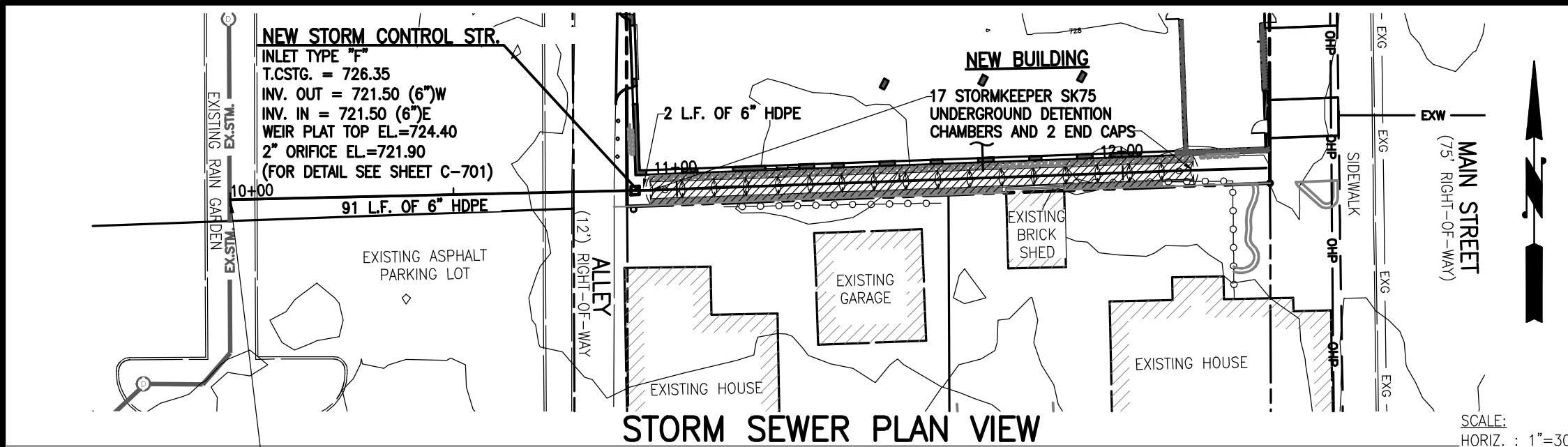
Jeffery K. Smith
2/4/22

JOB NUMBER
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OF 10 SHEETS
DATE
FEBRUARY 4, 2022

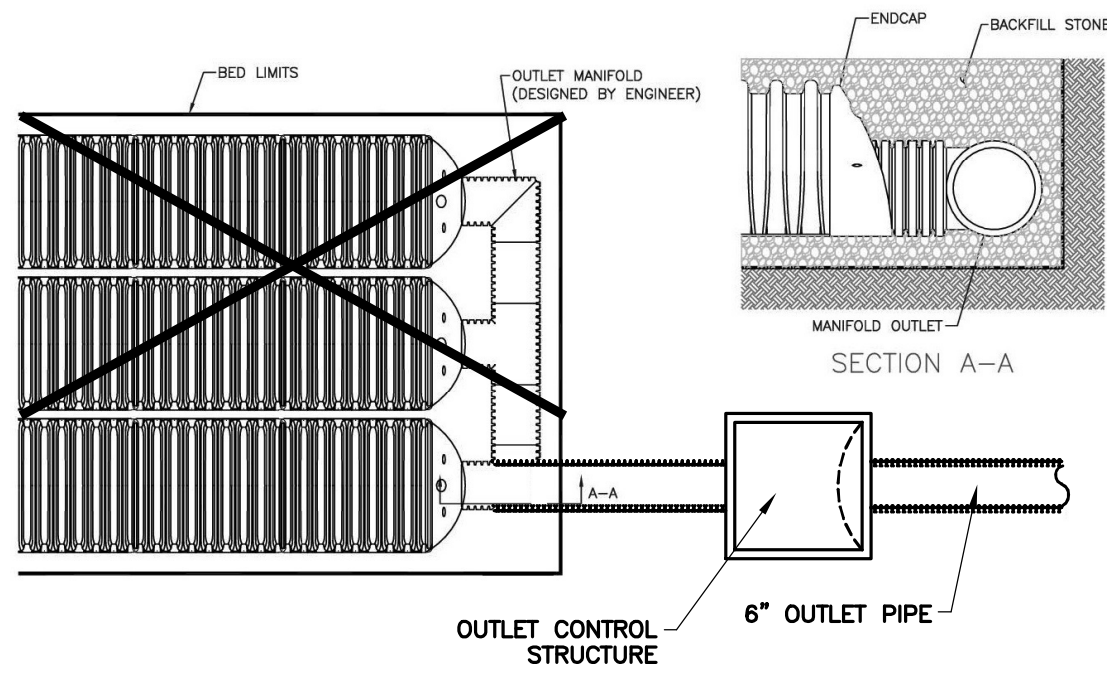


- STORMKEEPER SPECIFICATION**
- CHAMBERS SHALL BE STORMKEEPER SK75 OR APPROVED EQUAL.
 - CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE RESINS.
 - CHAMBERS SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM F2418.
 - CHAMBERS SHALL HAVE HANDLES INSTALLED IN THE BASE TO FACILITATE CONSTRUCTION OF THE SYSTEM.
 - CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS."
 - ROWS OF CHAMBERS SHALL BE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
 - THE STRUCTURAL DESIGN OF THE CHAMBERS, BACKFILL, AND INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET.
 - ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER SHALL BE ALLOWED.
 - CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
 - ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN GUIDELINES.
 - THE INSTALLATION OF THE CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION GUIDELINES.

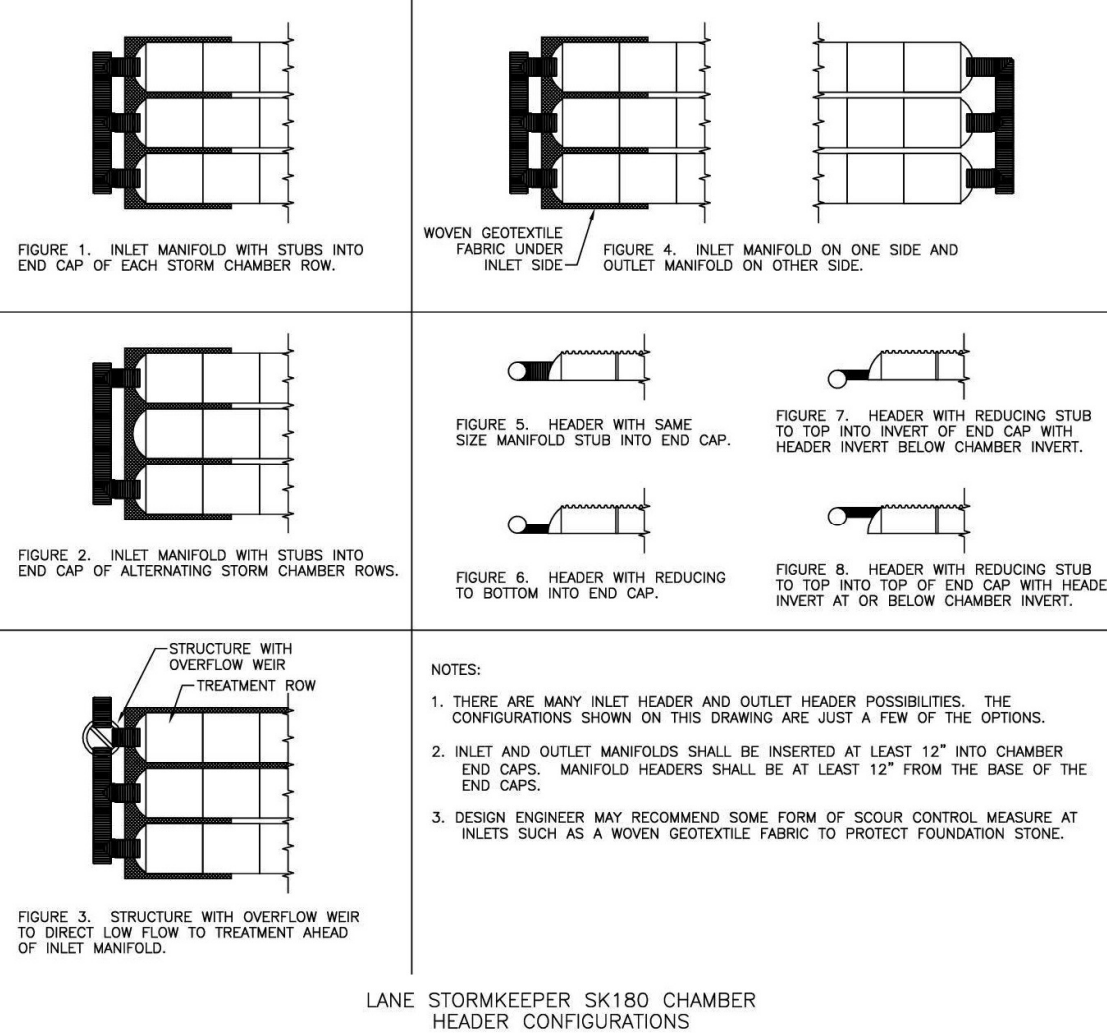
- LANE ENTERPRISES - STORMKEEPER SK75 PRODUCT SPECIFICATIONS**
- GENERAL
 - THE STORMKEEPER CHAMBERS ARE DESIGNED TO CONTROL STORM WATER RUNOFF.
 - THE STORMKEEPER CHAMBERS FUNCTION AS A SUBSURFACE RETENTION AND DETENTION STRUCTURE, AS A RETENTION STRUCTURE THE STORMKEEPER CHAMBERS STORE WATER ALLOWING INFILTRATION OF EXCESS RUNOFF FROM STORM EVENTS INTO THE SOIL. AS A DETENTION STRUCTURE THE STORMKEEPER CHAMBERS DETAIN STORM WATER AND PROVIDE CONTROLLED RELEASE OF THE STORM WATER INTO THE RECEIVING WATERS.

- STORMKEEPER SK75 CHAMBERS
- THE STORMKEEPER SK75 CHAMBERS SHALL BE INJECTION MOLDED AND CONSTRUCTED OF POLYPROPYLENE RESIN RESISTANT TO ENVIRONMENTAL STRESS CRACKING (ESCR) AND WITH ABILITY TO MAINTAIN ADEQUATE STIFFNESS THROUGHOUT THE CONSTRUCTION AND SERVICE LIFE OF THE CHAMBER. 2.2 THE NOMINAL DIMENSIONS OF THE STORMKEEPER SK75 SHALL BE 45.5 INCHES TALL, 77.8 INCHES WIDE, AND 88.7 INCHES LONG.
- THE CHAMBER SHALL BE CURVED TO FORM AN ARCH AND SHALL BE CONTINUOUSLY CURVED.
- THE CHAMBER SHALL BE OPEN BOTTOMED.
- JOINING OF CHAMBERS SHALL BE ACCOMPLISHED BY OVERLAPPING THE CORRUGATIONS OF LONGITUDINALLY ADJACENT CHAMBERS. ALLOWING THE CONSTRUCTION AND SERVICE LIFE OF THE CHAMBER. 2.2 THE NOMINAL DIMENSIONS OF THE STORMKEEPER SK75 SHALL BE 45.5 INCHES TALL, 77.8 INCHES WIDE, AND 88.7 INCHES LONG.
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- END CAPS
- THE END CAP SHALL BE ROTATIONAL OR INJECTION MOLDED FROM POLYPROPYLENE RESIN.
- THE END CAP SHALL BE DESIGNED TO FIT INTO ANY CORRUGATION ALONG THE LENGTH OF THE CHAMBER PROVIDING THE ABILITY TO TRIM A CHAMBER AND CAP IT AT ANY DESIRED LENGTH ALONG WITH SENSITIVE ROWS INTO CHAMBERS OF VARYING LENGTHS.
- THE END CAP SHALL HAVE GUIDES TO ALLOW EASY CUTTING OF VARIOUS DIAMETERS OF PIPE THAT MAY BE USED TO INLET WATER INTO THE SYSTEM. THE GUIDES WILL BE INTEGRATED AS PART OF THE END CAP MANUFACTURING PROCESS.
- THE END CAP SHALL HAVE ADEQUATE STRUCTURAL CAPACITY TO ALLOW THE END CAP INLETS TO BE CUT AT ANY INVERT ELEVATION.
- THE FACE OF THE END CAP SHALL BE CURVED.
- THE END CAP SHALL BE MANUFACTURED AT AN ISO 9001 CERTIFIED FACILITY.



LANE STORMKEEPER CHAMBERS OUTLET CONFIGURATION



LANE STORMKEEPER SK180 CHAMBER HEADER CONFIGURATIONS

SK31 and SK75 Chamber Installation Guideline

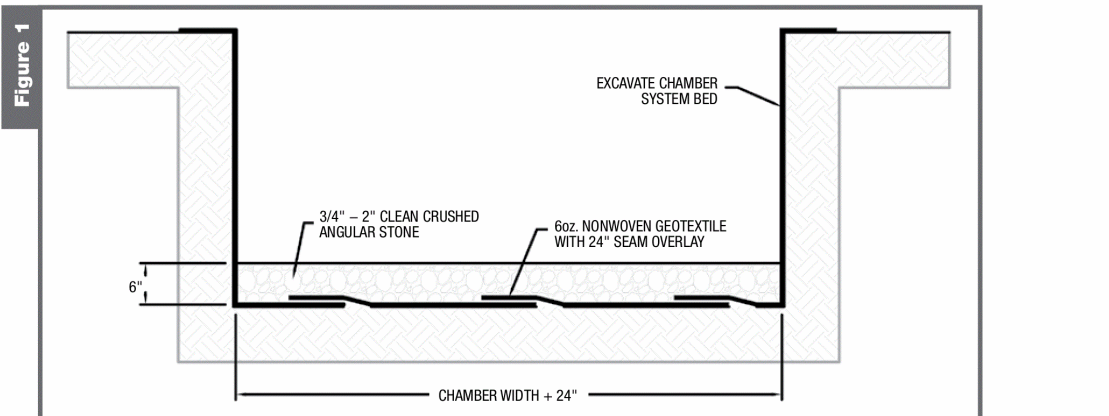
Prior to installation of the chamber system, adequate attention to the following guidelines is required. In addition, the chamber supplier, chamber installer (site contractor), and the design engineer may meet for a pre-construction meeting to discuss any questions relating to the installation process and the guidelines herein.

1 Handling and Storage

- Upon arrival to the project site, visually inspect the chambers to ensure accurate quantities. Any damage that may have occurred during transport should also be noted at this time.
- For efficient shipping and to allow ease in handling and storage, the chambers are stacked neatly upon themselves and secured to a pallet. Unloading is best accomplished via forklift.
- Chambers should be stored in an area that is flat and free of debris. To avoid the potential for damage, this storage area should be isolated well away from the traveling paths used for construction vehicle traffic.

2 Foundation and Bedding Preparation

- Using the project plans and the appropriate details, excavate the chamber system bed in a manner to sufficiently accommodate the chambers and manholes. To ensure an adequate fit and to allow for a stone border, an additional 12" of excavation is required between the trench sidewalls and the chamber system.
- If standing water is present, dewatering measures should be utilized.
- If a soft, unstable foundation is encountered, it should be over excavated and replaced with a suitable material as determined by the project engineer.
- Upon the prepared foundation, place a 6oz. nonwoven fabric on the bed bottom and up and along the sidewalls. Maintain a 24" overlap of fabric at all seams.
- Using the project plans and appropriate details, provide a level base of 3/4"-2" clean crushed angular stone over the entire trench bed bottom. Foundation stone depth as indicated on the project plans (6" minimum). See Figure 1. Using a vibratory roller, compact the stone base to achieve a flat level surface.
- If specified on the project plans, the perimeter underdrain piping may be laid at this point.

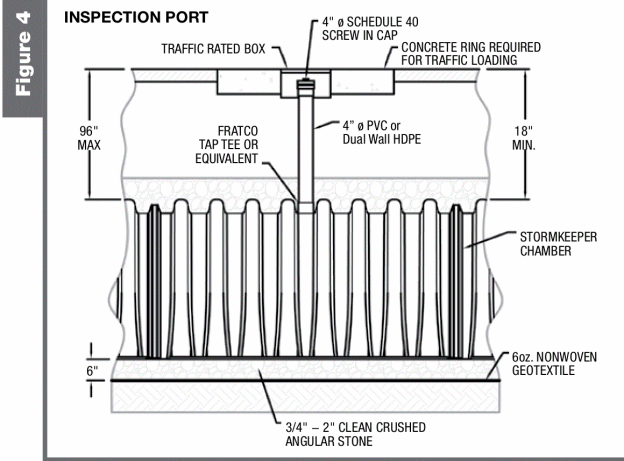


3 Manifold Assembly and Chamber Placement

- Using the project plans and appropriate details, fully assemble the manifold system.
- To alleviate the potential for scour at the inlet locations, lay a 16" wide strip of woven geotextile, along the entire length of the manifold mainline, adequately carpeting the bedding beneath the inlet locations. See Figure 2A3.
- Position the first chamber and end cap of each row with the inlet pipes. At the designated locations, core an opening in the end cap and insert the inlet pipe. The inlet pipes should penetrate 12" into the end cap. Repeat this process for each row.
- Maintaining a 6" minimum clear space between each row is required. The assembly of each row is achieved by over topping the last rib of the initial chamber with the first rib of the succeeding chamber. Overlap locations are labeled on each chamber. Row assembly should not exceed the reach of the backfill placement equipment. The final chamber of each row shall also be equipped with an end cap.
- Endcaps are placed with the endcap overlapping the top of the reduced size joining corrugation.

4 Inspection Port Placement

- Each chamber crown is equipped with one circular cut out point to accommodate the vertical inspection port riser. Using the project plans, identify which chambers should be fitted with inspection ports. Using a reciprocating saw, cut out the 4" diameter opening at the appropriate location. Insert a Tap-Tee or equal into the opening.
- Utilizing 4" PVC Sch. 40 pipe and fittings, build the inspection port as shown in Figure 4.



5 Chamber Backfill Process

- Backfill material used for embedment/anchoring and for surrounding areas will be 3/4"-2" particle size, clean, crushed angular stone.
- Placement of backfill material for embedment and surrounding areas is best accomplished by using the long reach of an excavator or stone shooter/conveyor system. **No construction equipment shall be situated atop of the chamber system.**
- In order to prevent chamber shifting and to maintain row spacing, carefully deposit the stone evenly along the centerline of the chamber, allowing the stone depth between the rows to rise equally. During this phase, stone height between rows should not differ by more than 12" at any time.
- After this initial anchoring phase is complete, stone placement may continue to surround the chambers and around the perimeter. Stone should fully encompass the chambers and should cover the top of the chamber crown to a minimum height of 6'.
- Small light weight tracked dozers with ground pressure less than 1100 lbs/sf may be used at this point to finalize the grading of cover stone. Stone must be pushed parallel to rows at all times. **Wheel and Roller Loads Not Allowed.**
- Cover the entire top of the stone bed with a layer of 6oz. Non-Woven fabric. Overlap all seams 24". Utilizing excavator positioned off bed, place initial backfill. Begin compaction at 12". Roller to travel parallel with rows.

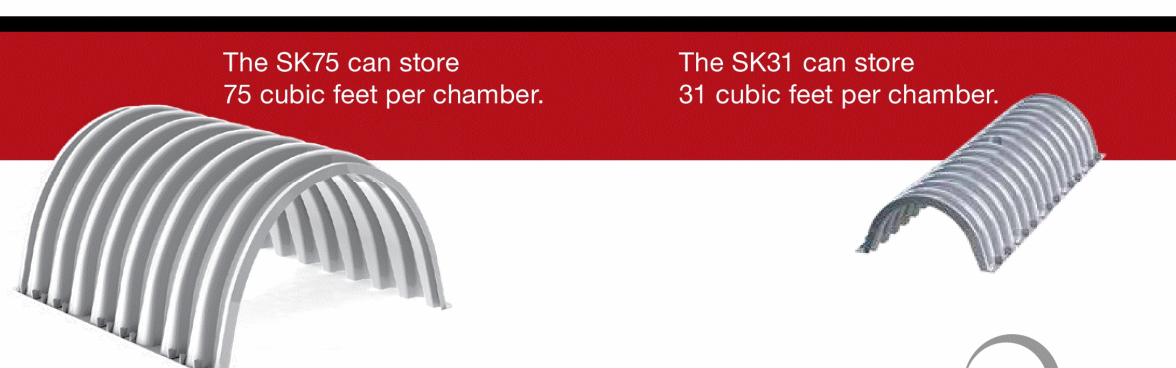
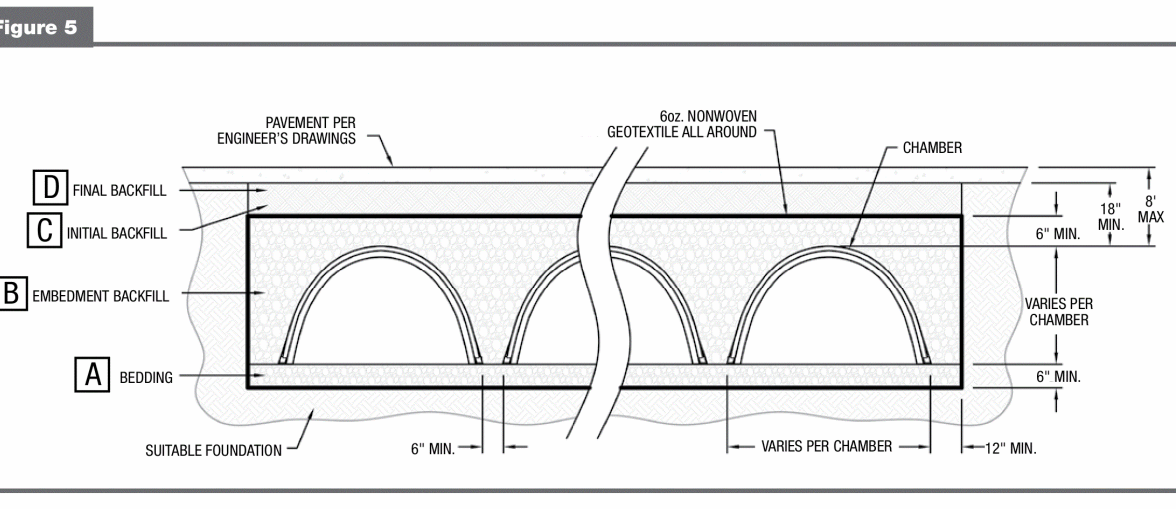


Table 1	Fill Material Location	Material Description	AASHTO M43 Designation	Compaction Requirements
(D) Final Backfill	Fill material for Layer D starts at the top of the C layer to the bottom of the pavement or to the finished grade of an unpaved surface. The pavement subbase may be part of the final backfill.	Any backfill which provides adequate subgrade for the pavement or to the finished grade of an unpaved surface. Plans shall indicate subgrade requirements.	N/A	Subgrade will be placed and compacted to the requirements as shown on the site plans.
(C) Initial Backfill	Material for layer C starts at the top of the embedment zone (layer B) and continues to 18" above the top of the chamber. The pavement subbase may be part of the initial backfill layer.	Well graded granular material, <35% fines.	AASHTO M45 A-1, A-2, A-3 AASHTO M43 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	Compaction will not begin until a minimum of 12" of material is placed over the chambers. Additional layers shall be compacted in 6" lifts to a minimum of 95% standard proctor density for well graded material. Roller grade vehicles are not to exceed 12,000 lbs, and dynamic force not to exceed 20,000 lbs.
(B) Embedment Stone	Embedment stone will surround the chambers and extends from the top of the bedding stone (layer A) to the bottom of the fabric layer.	3/4" to 2" clean crushed angular stone.	3, 357, 4, 467, 5, 56, 57	No compaction required
(A) Bedding Stone	Bedding Stone extends from the subgrade to the foot of the chambers.	3/4" to 2" clean crushed angular stone.	3, 357, 4, 467, 5, 56, 57	Placed in 6" lifts and compacted with a vibratory roller.

6 Construction Loading

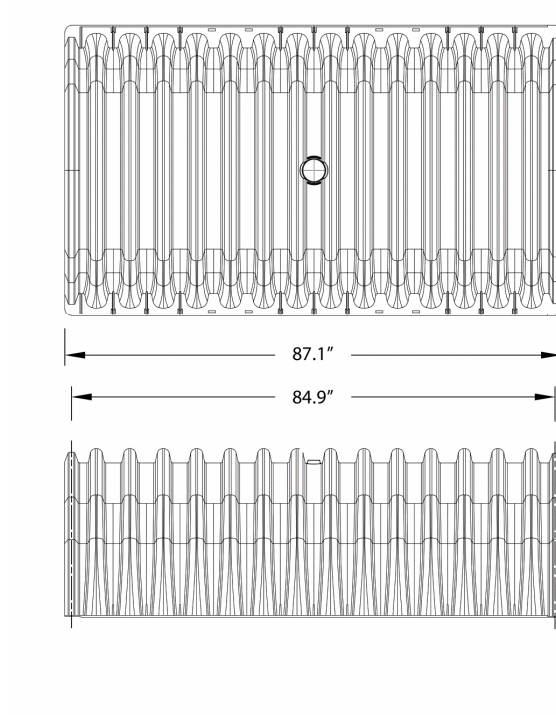
Refer to Table 2 for maximum allowable construction vehicle loads.

Table 2	Material Location	Fill Depth above chambers	Max Axle Load for Trucks	Max Allowable Wheel Loads	Track Width	Max Allowable Track Loads	Max allowable roller loads
(D) Final Fill Material	in 36" Compacted	18" 24" 30" 36"	32,000 32,000 32,000 32,000	16,000 16,000 16,000 16,000	12" 18" 24" 30" 36"	1480 1480 1480 1480 1480	20,000 20,000 20,000 20,000 20,000
(C) Initial Fill	24" Compacted	18" 24" 30" 36"	32,000 32,000 32,000 32,000	16,000 16,000 16,000 16,000	12" 18" 24" 30" 36"	1480 1480 1480 1480 1480	20,000 20,000 20,000 20,000 20,000
(B) Embedment Zone	12"	18" 24" 30" 36"	16,000 16,000 16,000 16,000	Not Allowed Not Allowed Not Allowed Not Allowed	12" 18" 24" 30" 36"	1480 1480 1480 1480 1480	20,000 20,000 20,000 20,000 20,000

StormKeeper SK75

The StormKeeper family of products are the highest quality and structurally sound stormwater chambers available on the market and meet the full requirements of ASTM F2418. The StormKeeper family of chambers are designed utilizing the most sophisticated and comprehensive techniques to meet the stringent AASHTO LRFD and ASTM requirements. Intended for use under traffic and nontraffic areas, StormKeeper provides a truly cost-effective and structurally superior system to provide underground stormwater storage saving valuable land and protecting the environment.

StormKeeper SK75	StormKeeper SK75 End Caps
Nominal Dimensions	Nominal Dimensions
Size (L x W x H)	87.1" x 51.0" x 29.7"
Chamber Storage	46.4 cf
Min. Installed Storage	74.9 cf
Weight	70 lbs



StormKeeper SK75

Volume of Excavation Required Per Chamber/End Cap	Stone Bedding Depth
StormKeeper SK75	6" 5.6 cy 12" 6.2 cy 18" 6.8 cy
StormKeeper SK75 End Cap	1.5 cy 1.6 cy 1.8 cy

Assumes 6" of separation between chamber rows, 12" of perimeter stone in front of end caps and 18" of cover. Should depth of cover exceed 18", the volume of excavation will increase accordingly.

Storage Volume Per Chamber/End Cap	Chamber Volume Only	Chamber and Stone Volume Bedding Depth
StormKeeper SK75	46.4 cf	6" 75 cf 12" 81.7 cf 18" 88.4 cf
StormKeeper SK75 End	2.73 cf	13.9 cf 15.6 cf 17.4 cf

Assumes 6" stone above chambers, 6" of stone between chambers and 40% stone porosity. End cap volume assumes 12" of stone perimeter.

Amount of Stone Per Chamber/End Cap	Stone Bedding Depth
StormKeeper SK75	6" 2.6 cy 12" 3.3 cy 18" 3.9 cy
StormKeeper SK75 End Cap	1.0 cy 1.2 cy 1.4 cy

Assumes 6" of stone above, 6" row spacing, and 12" of perimeter stone in front of end caps.

Table 3	Fill Material Location	Material Description	AASHTO M43 Designation	Compaction Requirements
(D) Final Backfill	Fill material for Layer D starts at the top of the C layer to the bottom of the pavement or to the finished grade of an unpaved surface. The pavement subbase may be part of the final backfill.	Any backfill which provides adequate subgrade for the pavement or to the finished grade of an unpaved surface. Plans shall indicate subgrade requirements.	N/A	Subgrade will be placed and compacted to the requirements as shown on the site plans.
(C) Initial Backfill	Material for layer C starts at the top of the embedment zone (layer B) and continues to 18" above the top of the chamber. The pavement subbase may be part of the initial backfill layer.	Well graded granular material, <35% fines.	AASHTO M45 A-1, A-2, A-3 AASHTO M43 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	Compaction will not begin until a minimum of 12" of material is placed over the chambers. Additional layers shall be compacted in 6" lifts to a minimum of 95% standard proctor density for well graded material. Roller grade vehicles are not to exceed 12,000 lbs, and dynamic force not to exceed 20,000 lbs.
(B) Embedment Stone	Embedment stone will surround the chambers and extends from the top of the bedding stone (layer A) to the bottom of the fabric layer.	3/4" to 2" clean crushed angular stone.	3, 357, 4, 467, 5, 56, 57	No compaction required
(A) Bedding Stone	Bedding Stone extends from the subgrade to the foot of the chambers.	3/4" to 2" clean crushed angular stone.	3, 357, 4, 467, 5, 56, 57	Placed in 6" lifts and compacted with a vibratory roller.

DETENTION PLAN NOTES

- DETENTION PLAN NOTES PERIODIC MAINTENANCE IS REQUIRED. THE FACILITY SHALL ALSO BE DESIGNED TO PROVIDE FOR THE EASY REMOVAL OF SEDIMENT THAT WILL ACCUMULATE DURING PERIODS OF OPERATION. MAINTENANCE SHALL BE PROVIDED PER THE O&M MANUAL.
- THERE SHALL BE NO TREES OR SHRUBS PLANTED, NOR ANY STRUCTURES OR FENCES ERECTED, IN ANY DRAINAGE EASEMENT, UNLESS OTHERWISE ACCEPTED BY THE JURISDICTIONAL ENTITY.

STORM EVENT	2-YEAR	10-YEAR	100-YEAR
PEAK Q IN (CFS)	0.41	0.85	1.50
RELEASE (CFS)	0.07	0.11	0.15
STAGE (FT)	722.49	723.23	724.30
VOLUME (CFT)	308	689	1244

UNDERGROUND DETENTION

DESCRIPTION

MANUFACTURER/TYPE

OVERALL PLAN DIMENSIONS

MATERIAL

DIA. OR DEPTH OF CHAMBERS

TOTAL VOLUME

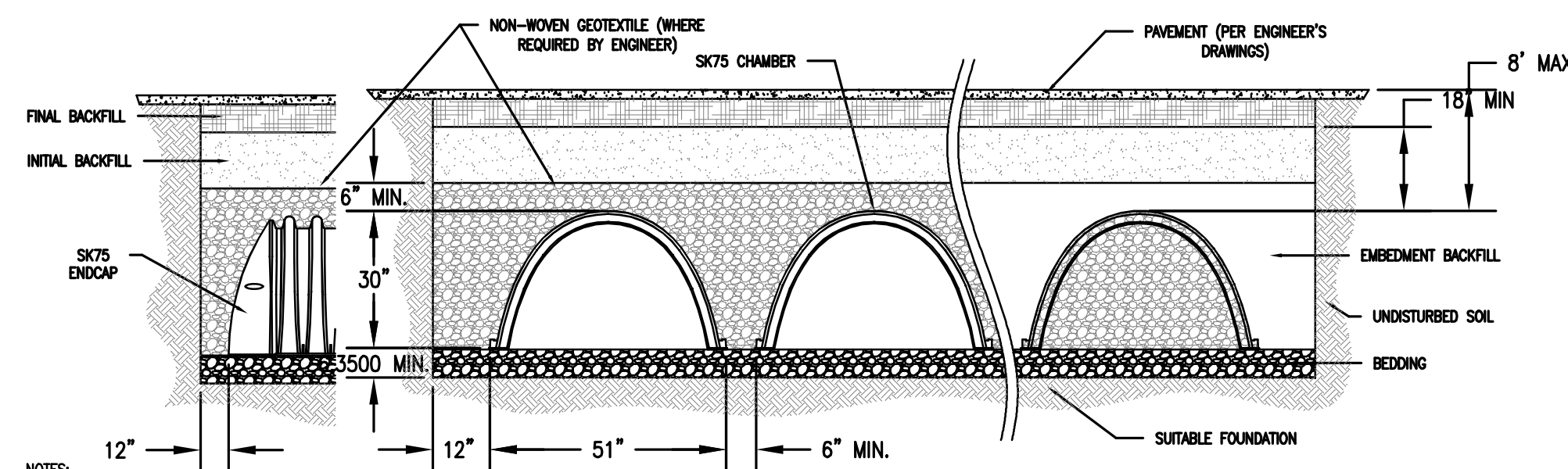
INVERT ELEVATION

MINIMUM COVER

APPLICATION

GROUND INFILTRATION

UNDERGROUND DETENTION DETAILS



- CHAMBER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION GUIDELINES.
- FOUNDATION: TRENCH BOTTOMS WITH UNSTABLE OR UNYIELDING MATERIAL SHALL BE EXCAVATED TO A DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL. FOR UNSTABLE MATERIALS, GEOTEXTILE MAY BE USED TO STABILIZE THE TRENCH BOTTOM, IF DIRECTED BY THE ENGINEER. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING FOUNDATION SUITABILITY.
- GEOTEXTILE: A 6oz. NON-WOVEN GEOTEXTILE FILTER FABRIC SHOULD BE USED TO PREVENT NATIVE SOIL FROM MIGRATING INTO THE INITIAL BACKFILL MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE A 3/4" - 2" INCH, CLEAN, CRUSHED ANGULAR STONE, OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57) WITH CLEAN, CRUSHED, ANGULAR STONE ADDED TO THE GRADATION, 4-6" CLEAN, CRUSHED, ANGULAR #3 (AASHTO M43) STONE. MINIMUM BEDDING THICKNESS SHALL BE 6 INCHES. COMPACTION SHOULD BE DONE IN LIFTS OF NO MORE THAN 9 INCHES TO A DENSITY OF 95% STANDARD PROCTOR DENSITY.
- EMBEDMENT BACKFILL: SUITABLE MATERIAL SHALL BE A 3/4" - 2" INCH, CLEAN, CRUSHED ANGULAR STONE, OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57) WITH CLEAN, CRUSHED, ANGULAR STONE ADDED TO THE GRADATION, 4-6" CLEAN, CRUSHED, ANGULAR #3 (AASHTO M43) STONE. EMBEDMENT BACKFILL SHALL EXTEND FROM TOP OF BEDDING TO NOT LESS THAN 6 INCHES ABOVE THE TOP OF THE CHAMBER. NO COMPACTION IS REQUIRED BUT AN EFFORT SHOULD BE MADE TO HAND KNIFE STONE INTO ALL CORRUGATIONS.
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE A GRANULAR, WELL GRADED SOIL WITH LESS THAN 35% FINES OR AASHTO M43 SIZES (3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10) WITH CLEAN, CRUSHED, ANGULAR STONE ADDED TO THE GRADATION. INITIAL BACKFILL SHALL EXTEND FROM TOP OF EMBEDMENT BACKFILL TO NOT LESS THAN 18 INCHES ABOVE THE TOP OF THE CHAMBER. COMPACTION SHOULD BE BROUGHT TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
- FINAL BACKFILL: SUITABLE MATERIALS SHALL BE ANY SOIL DIRECTED BY THE ENGINEER. FINAL BACKFILL SHALL EXTEND FROM TOP OF INITIAL BACKFILL TO NO MORE THAN 8 FEET ABOVE THE TOP OF THE CHAMBER. COMPACTION LEVELS SHOULD FOLLOW ENGINEER'S RECOMMENDATIONS.
- MINIMUM COVER: FOR UP TO 12-25 TRAFFIC APPLICATIONS A MINIMUM COVER OF 18 INCHES IS REQUIRED. MEASURED FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF THE FLEXIBLE PAVEMENT. ADDITIONAL COVER MAY BE REQUIRED FOR CONSTRUCTION LOADS OR WHERE RUTTING MAY TAKE PLACE.
- MAXIMUM COVER: A COVER HEIGHT OF OVER 8 FEET IS NOT RECOMMENDED. COVER HEIGHT IS MEASURED FROM THE TOP OF THE CHAMBER TO THE TOP OF THE PAVEMENT.

PROJECT

150 S. MAIN STREET CONDOMINIUMS

CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

SCALE

NONE

DRAWN

MP

CHECKED

JKS

CERTIFIED

JKS

REVISION

DATE

TITLE

SITE DETAILS - UNDERGROUND STORM DETENTION CHAMBER DETAILS

SEAL

JEFFERY K. SMITH

REGISTERED

No. 19419

STATE OF INDIANA

PROFESSIONAL ENGINEER

2/4/22

JOB NUMBER

21016

SHEET

OF

10

SHEETS

DATE

FEBRUARY 4, 2022

