

FILE PATH: C:\Studio A Projects\170028 FRANKLIN TECH PARK (THIS INFO COPIED ONTO CURRENT FILE ON A360 1-21-2018)\FTP QUARD SHACK.dwg PLOT SCALE: 1:1 PLOT DATE: 1/9/2020 11:21:20 AM PLOTTED BY: ANNMO



SITE VICINITY MAP  
NOT TO SCALE



SITE LOCATION MAP  
NOT TO SCALE



# CONSTRUCTION PLANS FOR: PROJECT PIONEER 180 BARTRAM PARKWAY FRANKLIN, INDIANA 46131

SOUTHWEST QUAD OF S.R. 44 & BARTRAM PARKWAY  
JOHNSON COUNTY, INDIANA

SW QUARTER OF SECT. 17, PART OF THE SE QUARTER OF SECT. 18,  
PART OF THE NE QUARTER OF SECT. 19,  
AND PART OF THE NW QUARTER OF SECT. 20, TWP. 12 NORTH, RANGE 5 EAST

## OPERATING AUTHORITIES

Franklin Planning and Engineering  
70 East Monroe Street  
Franklin, IN 46131  
Contact: Mark Richards (City Engineer)  
Phone: (877) 736-3631  
Email: mrichards@franklin.in.gov

City of Franklin (storm)  
Richard L. DeWeitt (MS4 Coordinator)  
796 S State Street  
Franklin, IN 46131  
Phone: (888)736-3640

City of Franklin (wastewater)  
Dept. of Public Works  
Rick Littleton, Superintendent  
796 S State Street  
Franklin, IN 46131  
Phone: (888)736-3640x1200

Indiana American Water Company (water)  
Troy Bryant  
Phone: (317)831-3385

Johnson County REMC (electric)  
750 International Drive  
PO Box 309  
Franklin, IN 46131

Vectren Energy (gas)  
PO Box 209  
Evansville, IN 47702  
(812)464-4600

Century Link/Metronet/Comast  
(Telephone/Fiber/Cable)

## GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY OR TOWN, COUNTY AND STATE GOVERNMENT AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE AREA OF THE PROJECT SITE BEFORE STARTING CONSTRUCTION.
3. 18" OF VERTICAL SEPARATION SHALL BE MAINTAINED FOR ALL UTILITY CROSSINGS.
4. ALL GRADES AT BOUNDARY SHALL MATCH EXISTING GRADES.
5. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY EXISTING UTILITIES AND CONDITIONS PERTAINING TO THE PHASE OF WORK. IT IS THE SUBCONTRACTORS RESPONSIBILITY TO CONTACT THE OWNERS OF THE VARIOUS UTILITIES FOR PROPER STAKE LOCATION OF EACH UTILITY BEFORE WORK IS STARTED. THE SUBCONTRACTOR IS TO NOTIFY IN WRITING THE OWNER AND ENGINEER OF ANY CHANGES, ERRORS OR OMISSIONS FOUND ON THE PLANS BEFORE ANY WORK IS PERFORMED OR RESUMED.
6. ANY PART OF THE SANITARY SEWER AND WATER MAIN TRENCHES RUNNING UNDER PAVED AREAS ARE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.
7. THE SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE FOR INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITY COMPANIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION FOR FIELD LOCATION OF SERVICES.
8. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION IS TO CONFORM TO APPLICABLE LOCAL STANDARDS, INDOT MUTCD AND INDOT SPECIFICATIONS.
9. ALL CONSTRUCTION ACTIVITY ON THIS SITE IS TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.

## ZONING:

PROJECT SITE: INDUSTRIAL, LIGHT (IL)  
PROPOSED USE PERMITTED: WAREHOUSE & DISTRIBUTION FACILITY  
ADJACENT SITE:  
NORTH: MXR & IL  
EAST: MXR, GW-OL, & IL  
SOUTH: IL  
WEST: MXR, GW-OL, & IL

## FLOOD ZONE:

THE PROJECT IS LOCATED IN AN UNSHADED ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN) AS INDICATED ON THE JOHNSON COUNTY, INDIANA FLOOD INSURANCE RATE MAP 18081C0232D, DATED AUGUST 2, 2007.

## DESIGN DATA:

INDIANA STATE DEPARTMENT OF TRANSPORTION STANDARD SPECIFICATIONS. LATEST EDITION TO BE USED WITH THESE PLANS.

ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION TO BE USED WITH THESE PLANS.

ALL STORM WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CITY OF FRANKLIN STANDARDS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED OTHERWISE. IN THE EVENT THESE PLANS ARE IN CONFLICT WITH SAID STANDARDS, THE MORE STRINGENT REQUIREMENTS SHALL BE USED.

ALL DETAILS AND SPECIFICATIONS FOR WATERMAIN CONSTRUCTION SHALL MEET THE CURRENT REQUIREMENTS OF INDIANA AMERICAN WATER COMPANY.

ALL DETAILS AND SPECIFICATION FOR SANITARY SEWER CONSTRUCTION SHALL MEET THE CURRENT REQUIREMENTS OF THE CITY OF FRANKLIN.

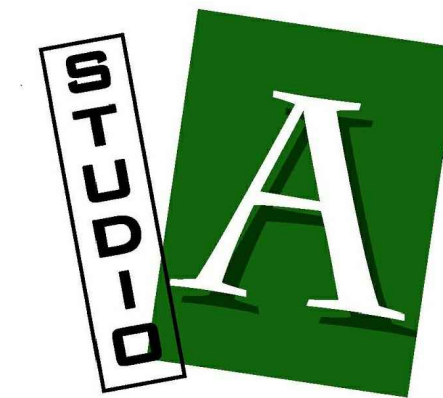
INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL FOR DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION TO BE USED WITH THESE PLANS.

## PLANS PREPARED FOR:



Sunbeam Development Corporation  
11800 Exit Five Parkway  
Fishers, Indiana 46037  
Contact Person: Ken Kern  
Telephone: (317) 842-1166  
Email: kkern@sunbeamdevelopment.com

## PLANS PREPARED BY:



Studio A of Indianapolis, Inc.  
9511 East 96th Street  
Indianapolis, IN 46256  
(317)585-0834  
Contact: Max Mouser  
Email: maxmouser@sbcglobal.net  
www.studioAindy.com

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SHEET NO.

PLAN DATE: DEC 5, 2019 **C100**  
JOB NUMBER: 170028

## BENCHMARK NOTE

BENCHMARK INFORMATION (NAVD '88 DATUM)

ASI TBM 102 (ORIGINATING BENCHMARK)  
CHISELED "X" ON NORTHEAST BOLT OF FIRE HYDRANT LOCATED  
25'± WEST OF CENTERLINE OF BARTRAM PARKWAY AND 1,100'±  
SOUTH OF CENTERLINE OF SR 44.  
ELEV: 729.66

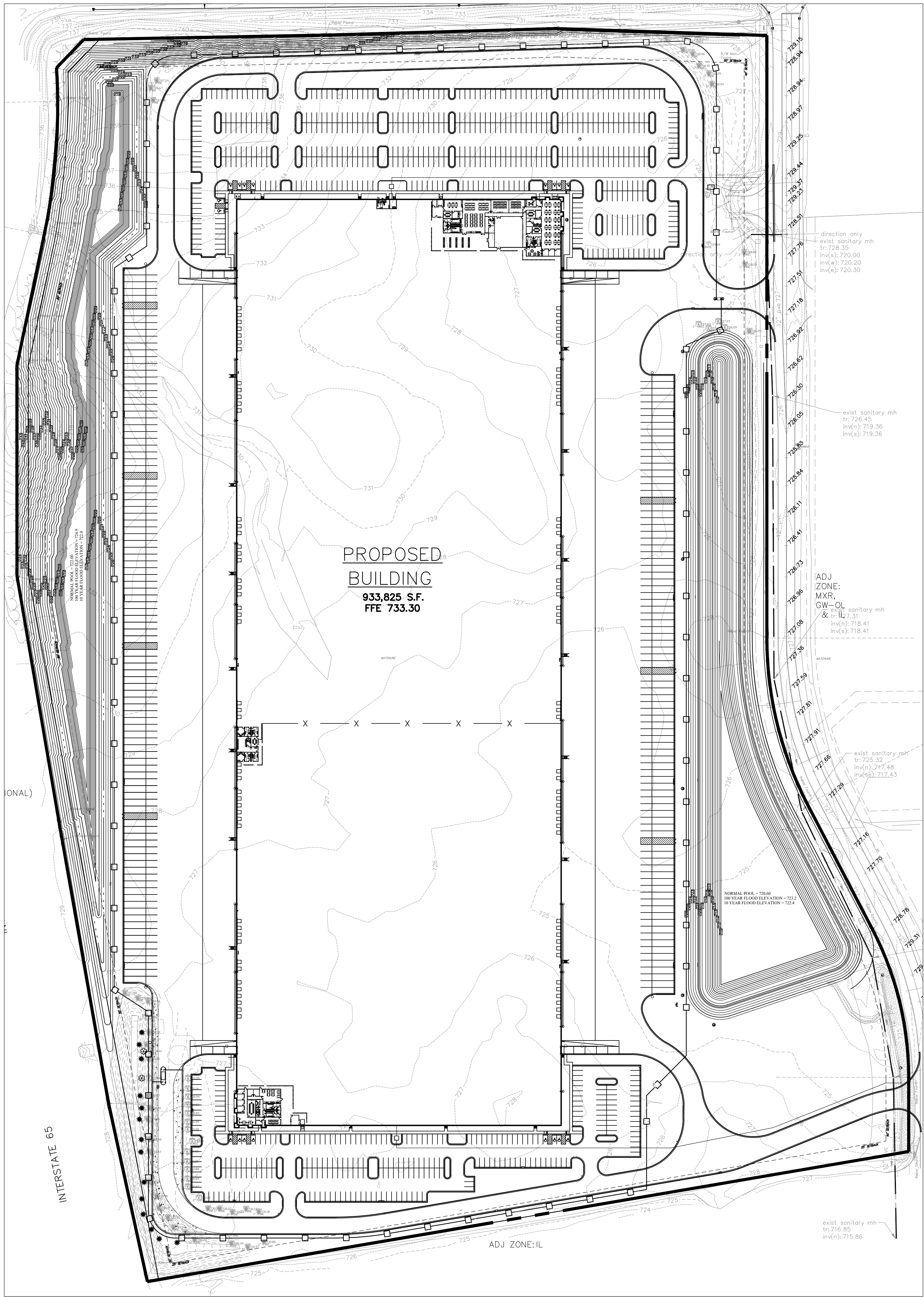
ASI TBM 31  
CHISELED "X" ON WEST BOLT OF FIRE HYDRANT LOCATED 25'±  
WEST OF CENTERLINE OF BARTRAM PARKWAY AND 800'± SOUTH  
OF CENTERLINE OF SR 44.  
ELEV: 728.13

ASI TBM 32  
CHISELED "X" ON WEST BOLT OF FIRE HYDRANT LOCATED 25'±  
WEST OF CENTERLINE OF BARTRAM PARKWAY AND 400'± SOUTH  
OF CENTERLINE OF SR 44.  
ELEV: 731.40

ASI TBM 33  
CHISELED "SQUARE" ON SOUTH SIDE OF LIGHT POLE BASE,  
LOCATED 50'± SOUTH OF SR 44 AND 250'± EAST OF I-65  
NORTH RAMP.  
ELEV: 738.38



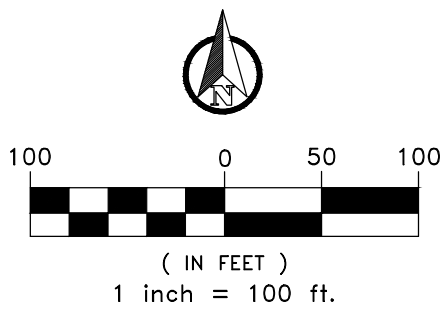




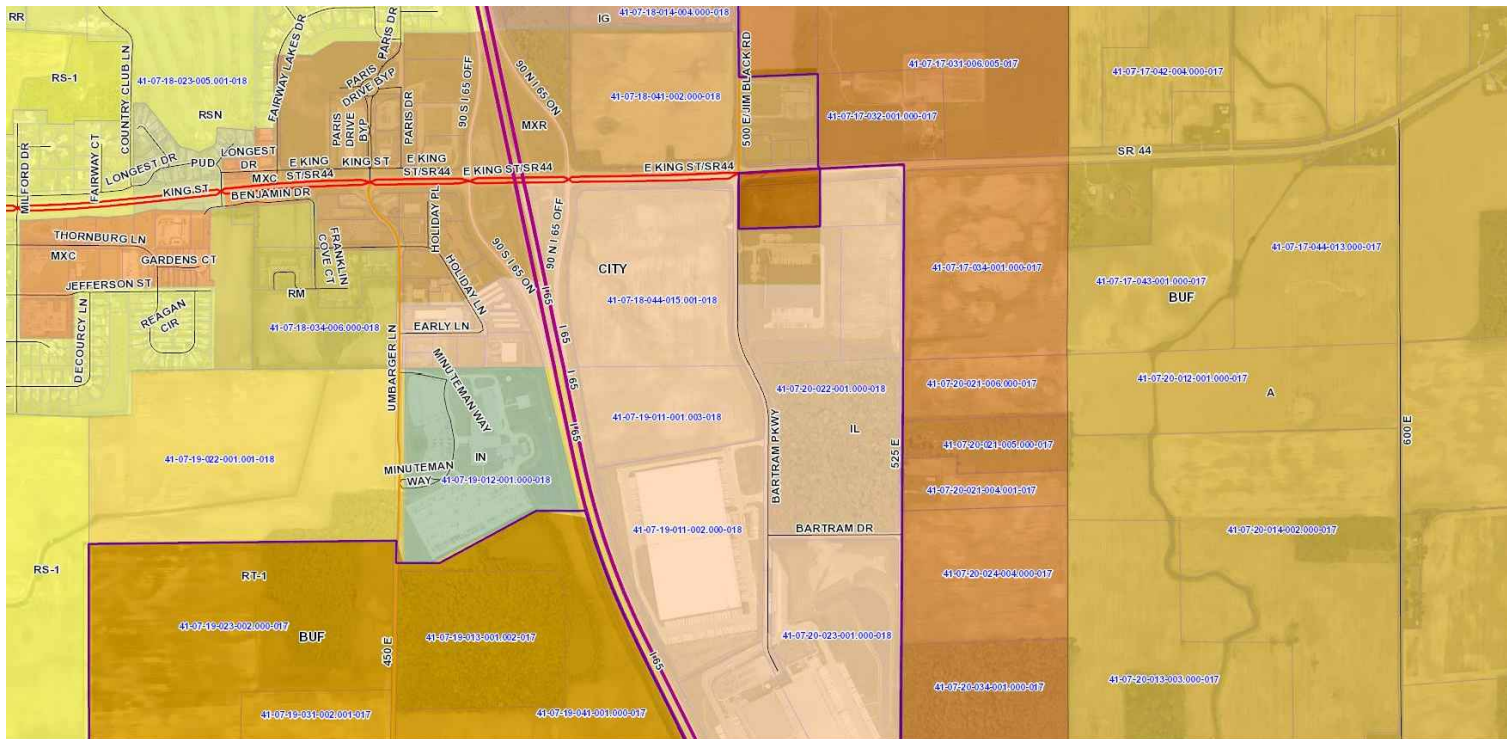
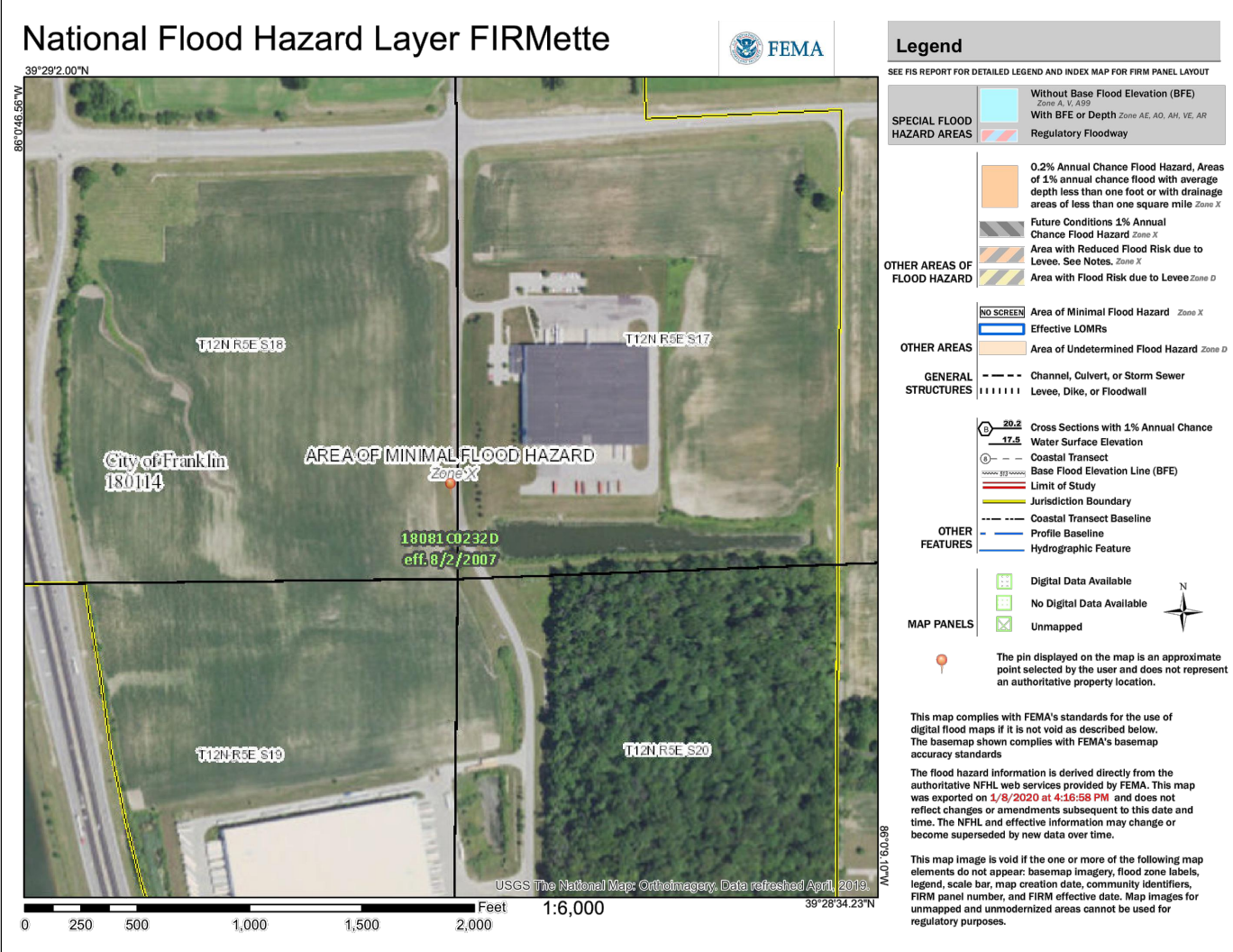
LAND DESCRIPTION-AS SURVEYED

A part of the Southwest Quarter of Section 17, a part of the Southeast Quarter of Section 18, a part of the Northeast Quarter of Section 19 and a part of the Northwest Quarter of Section 20, all in Township 12 North, Range 5 East of the Second Principal Meridian, Johnson County, Indiana, more particularly described as follows:

COMMENCING at the Northeast corner of the Northeast Quarter of said Section 19; thence South 89 degrees 18 minutes 04 seconds West on and along the North line thereof a distance of 1,277.07 feet to the POINT OF BEGINNING of this described tract of land, said point also being on the Eastern Limited Access right-of-way line of Interstate 65, the next eight (8) courses being on and along said Eastern right-of-way line; (1) thence North 09 degrees 59 minutes 19 seconds West a distance of 29.07 feet; (2) thence North 09 degrees 41 minutes 22 seconds West a distance of 442.64 feet; (3) thence North 00 degrees 01 minute 32 seconds West a distance of 371.43 feet to a point on a curve to the right having a radius of 1,367.39 feet; (4) thence on and along the arc of said curve a distance of 73.93 feet, said arc being subtended by a chord having a bearing of North 10 degrees 45 minutes 04 seconds East and a chord distance of 73.92 feet; (5) thence North 12 degrees 17 minutes 54 seconds East a distance of 160.00 feet to a point on a curve to the left having a radius of 1,019.93 feet; (6) thence on and along the arc of said curve a distance of 237.83 feet, said arc being subtended by a chord having a bearing of North 05 degrees 37 minutes 05 seconds East and a chord distance of 237.29 feet; (7) thence North 01 degrees 03 minutes 45 seconds West a distance of 59.01 feet; (8) thence North 43 degrees 38 minutes 58 seconds East a distance of 68.95 feet to a point on the South right-of-way line of State Road 44, the next two (2) courses being on and along said South right-of-way line; (1) thence North 88 degrees 56 minutes 15 seconds East a distance of 427.05 feet to the point of curvature of a curve to the left having a radius of 21,577.92 feet; (2) thence on and along the arc of said curve a distance of 407.53 feet, said arc being subtended by a chord having a bearing of North 88 degrees 23 minutes 47 seconds East and a chord distance of 407.52 feet to the west corner of a 0.116 acre parcel described in Instrument Number 2012-010720n file in the Office of the recorder of Johnson County, Indiana; thence South 88 degrees 07 minutes 27 seconds East 369.99 feet along the south line of said 0.116 acre parcel to a point on the West right-of-way line of Bartram Parkway as described in a Road Right-of-way and Easement Instrument for Franklin Tech Park, recorded as Instrument #2002038647 in said Recorder's Office, the next eleven (11) courses being on and along said West right-of-way line; (1) thence South 00 degrees 00 minutes 06 seconds West a distance of 236.68 feet; (2) thence South 43 degrees 58 minutes 41 seconds West a distance of 50.37 feet; (3) thence South 87 degrees 57 minutes 16 seconds West a distance of 29.45 feet; (4) thence South 02 degrees 02 minutes 44 seconds East a distance of 50.00 feet; (5) thence North 87 degrees 57 minutes 16 seconds East a distance of 27.66 feet; (6) thence South 46 degrees 01 minute 19 seconds East a distance of 48.61 feet; (7) thence South 00 degrees 00 minutes 06 seconds West a distance of 705.21 feet to the point of curvature of a curve to the left having a radius of 635.00 feet; (8) thence on and along the arc of said curve a distance of 304.30 feet, said arc being subtended by a chord having a bearing of South 13 degrees 43 minutes 37 seconds East and a chord distance of 301.40 feet to the point of tangency of said curve; (9) thence South 27 degrees 27 minutes 20 seconds East a distance of 249.04 feet to the point of curvature of a curve to the right having a radius of 565.00 feet; (10) thence on and along the arc of said curve a distance of 270.76 feet, said arc being subtended by a chord having a bearing of South 13 degrees 43 minutes 37 seconds East and a chord distance of 268.17 feet to the point of tangency of said curve; (11) thence South 00 degrees 00 minutes 06 seconds West a distance of 130.69 feet to the Northeast corner of Lot Number 3 in Franklin Tech Park, per plat thereof, recorded in Plat Cabinet D, Slide 765 A & B; thence South 80 degrees 18 minutes 38 seconds West along the north line of said Lot 3 a distance of 1361.23 feet to the northwest corner of said Lot 3 and the said Eastern right-of-way line of Interstate 65, which is on a non-tangent curve to the right having a radius of 5,599.58 feet, the next three (3) courses being on and along said Eastern right-of-way line; (1) thence on and along the arc of said curve a distance of 5.62 feet, said arc being subtended by a chord having a bearing of North 12 degrees 18 minutes 28 seconds West and a chord distance of 5.61 feet to the point of tangency of said curve; (2) thence North 12 degrees 16 minutes 45 seconds West a distance of 316.00 feet; (3) thence North 09 degrees 59 minutes 19 seconds West a distance of 471.33 feet to the POINT OF BEGINNING containing 63.508 acres more or less.



SITE DATA TABLE				
SITE AREA	SITE ZONING	BUILDING AREA	BUILDING HT.	LOT COVERAGE
63.508 ACRES	IL INDUSTRIAL, LIGHT	933,825 SQ FT	40.5' (MAX 50')	73%(MAX 85%)
FRONT BUFFERYARD	SIDE BUFFERYARD	REAR BUFFERYARD		REQ'D OPEN SPACE
0 AND 10 FEET	0 FEET	30 FEET		5%
FRONT BUILDING SETBACK		SIDE BUILDING SETBACK	REAR BUILDING SETBACK	
40 FEET	25 FEET	25 FEET		
PARKING REQUIREMENTS	UNITS	SPACES REQUIRED	SPACES PROVIDED	
1 SPACE PER EMPLOYEE DURING MAX. SHIFT	TO BE DETERMINED	TO BE DETERMINED	817	
1 SPACE PER 10 EMPLOYEES (VISITOR)	TO BE DETERMINED	TO BE DETERMINED	817	
		STANDARD PARKING	799	
		HANDICAP PARKING	18	
		TRUCK TRAILER PARKING	191	
		BICYCLE PARKING	4	

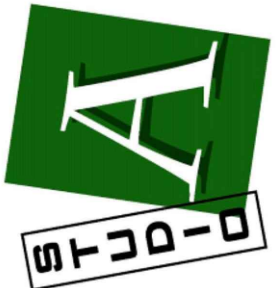


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Franklin, Indiana 46131

INFORMATION PLAN

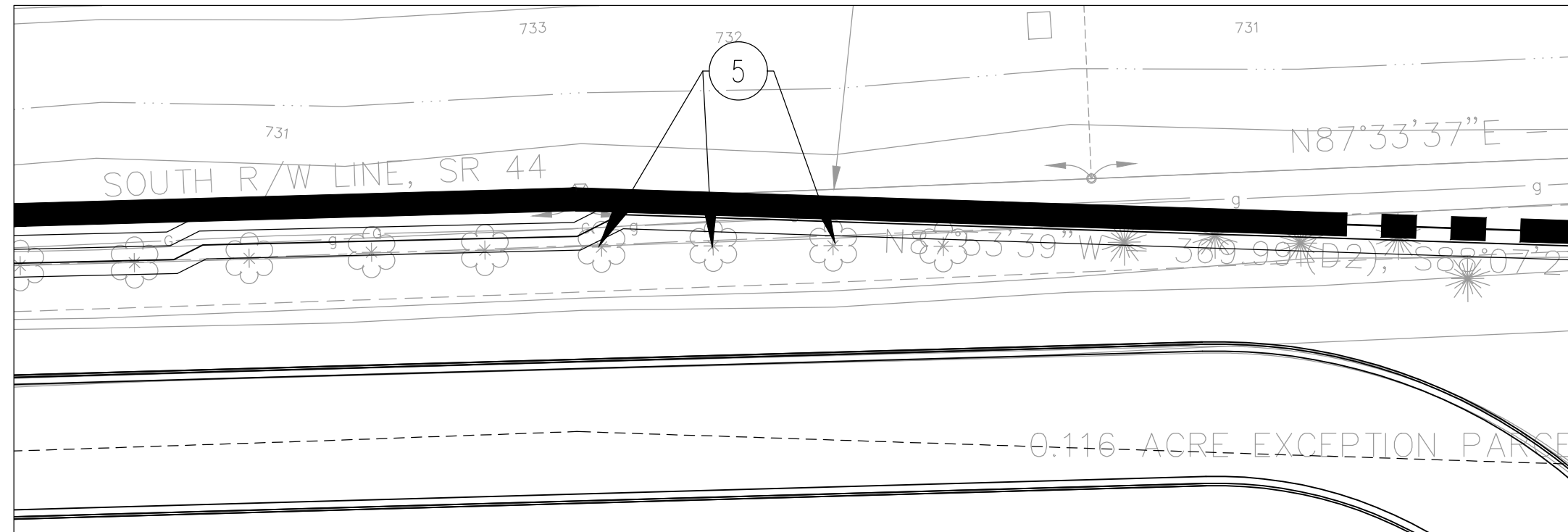
DATE:	12/5/2019
JOB NO.	170028
DRAWN BY:	AMM
CHECKED BY:	MM
REVISIONS	

SHEET NO.  
**C101**

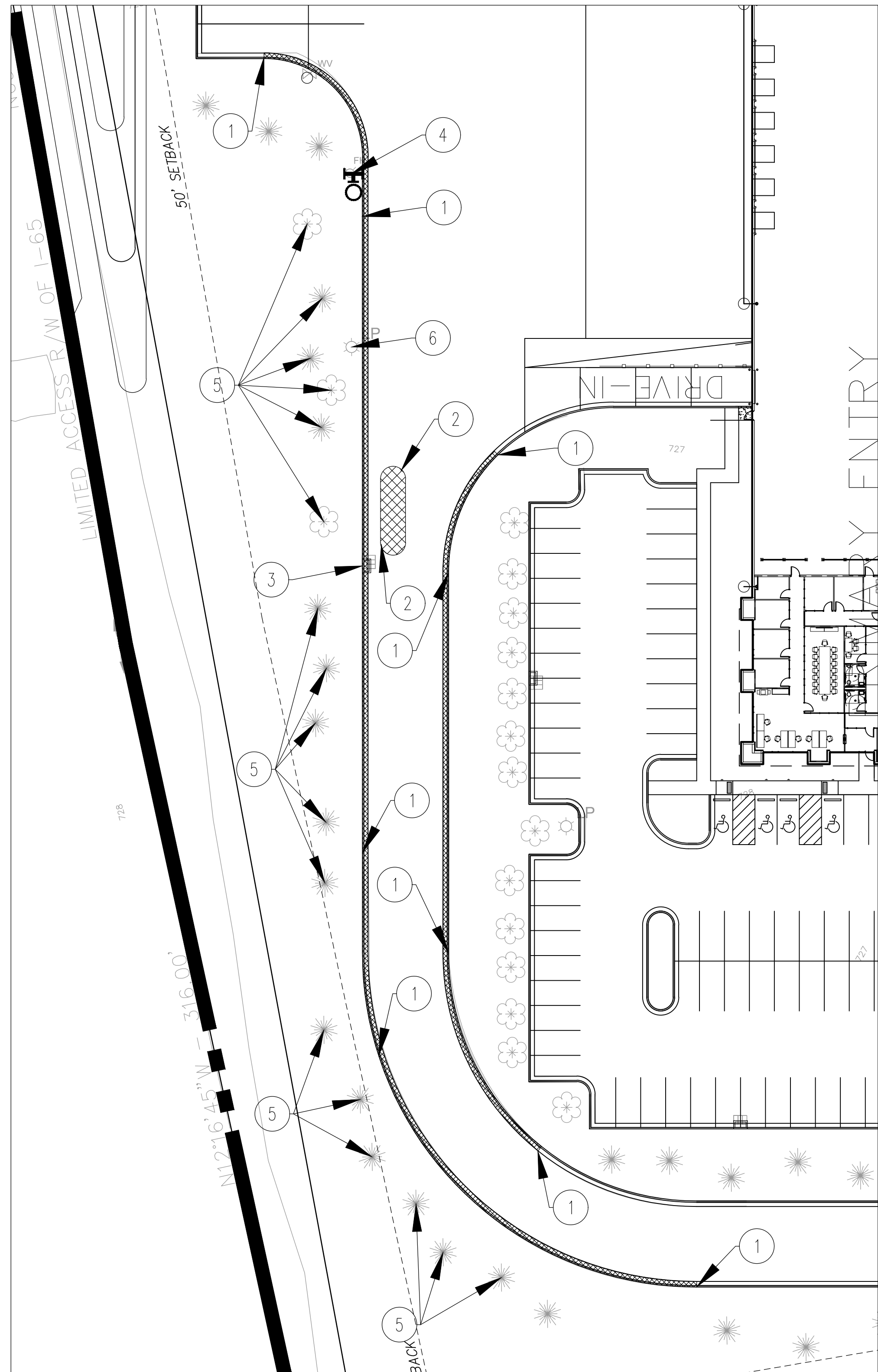


FILE PATH: C:\Studio A Projects\170028 FRANKLIN TECH PARK (THIS INFO COPIED ONTO CURRENT FILE ON A360 1-21-2018)\FTP GUARD SHACK.dwg PLOT SCALE: 1:1.7167 PLOT DATE: 1/9/2020 11:21:58 AM PLOTTED BY: ANNWO

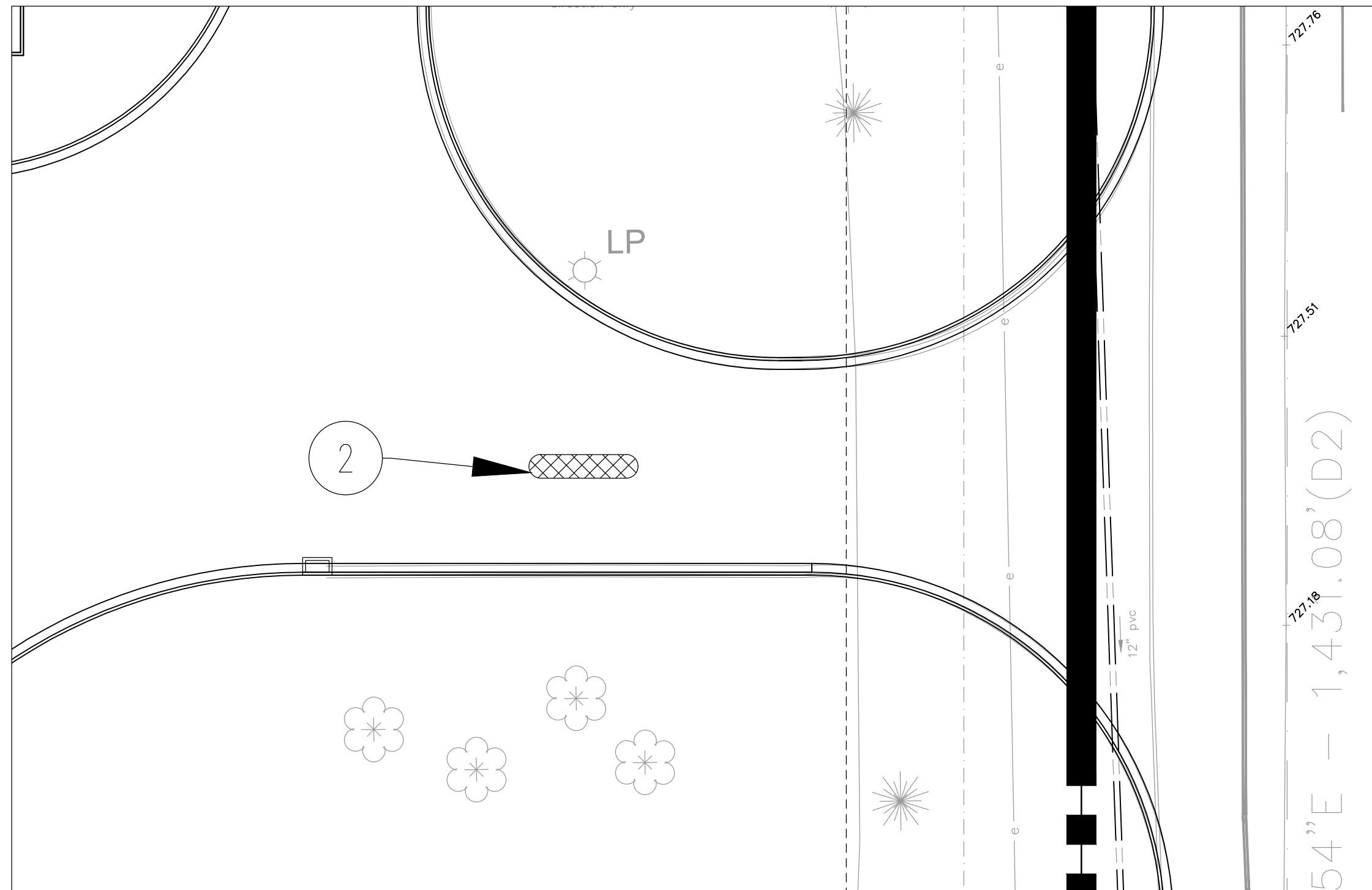
## NE BOUNDARY



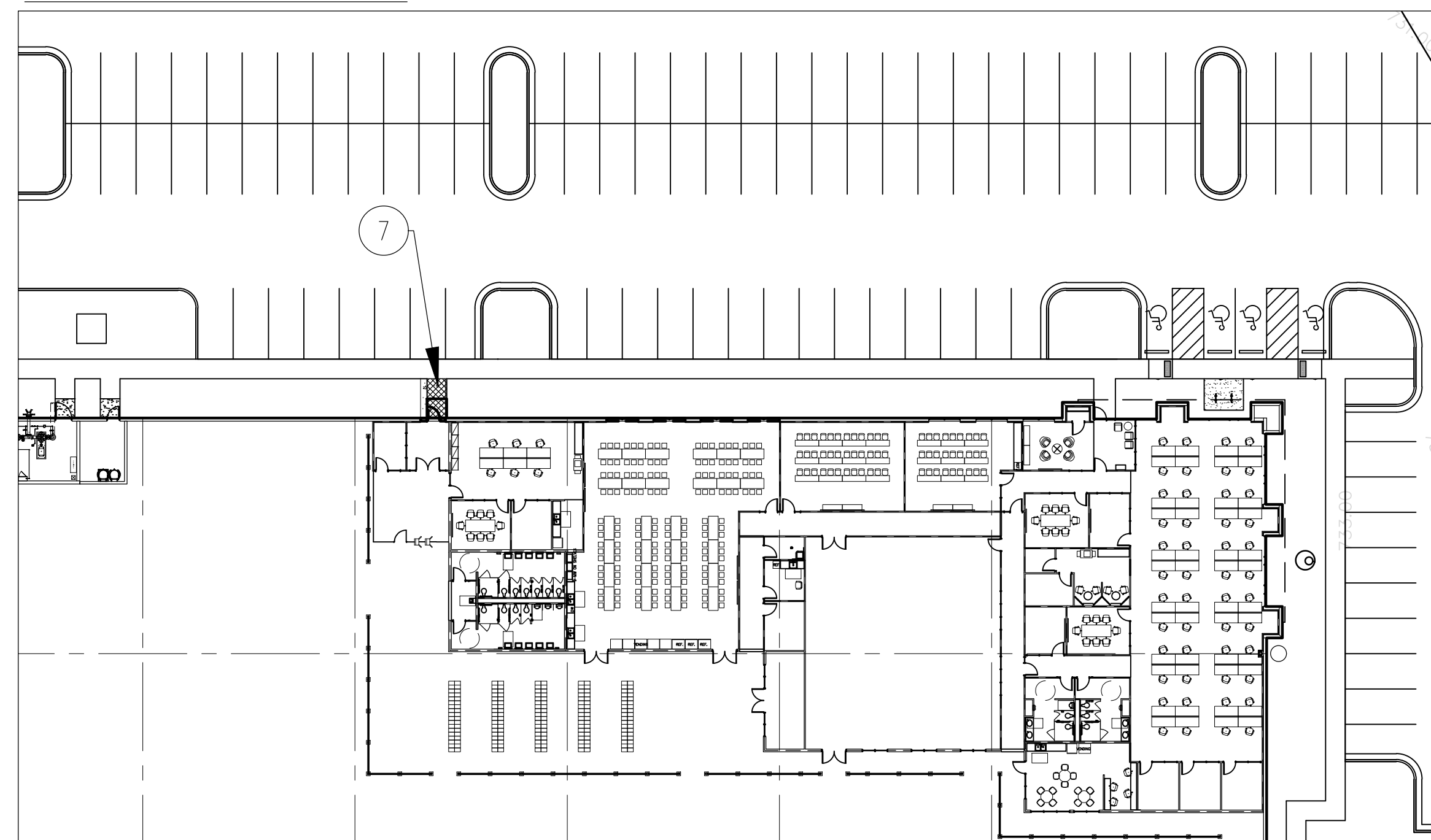
## SW CORNER



## NE ENTRANCE



## NE CORNER



### DEMOLITION NOTES:

- ① SAW CUT AND REMOVE EXISTING CURB AND GUTTER
- ② SAW CUT AND REMOVE EXISTING CONCRETE PAVEMENT
- ③ REMOVE AND REPLACE EXISTING CASTING WITH A NEENAH R-3455-C
- ④ REMOVE AND RELOCATE EXISTING FIRE HYDRANT
- ⑤ REMOVE AND RELOCATE EXISTING TREES AND SHRUBS
- ⑥ REMOVE AND RELOCATE EXISTING LIGHT POST
- ⑦ SAW CUT AND REMOVE EXISTING CONCRETE SIDEWALK

### GENERAL DEMOLITION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY MATERIALS AND/OR STRUCTURES NOT LOCATED ON THIS SURVEY.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PERTAINING TO THEIR PHASE OF WORK, AND TO VERIFY WHICH UTILITIES WILL BE REMOVED BY UTILITY COMPANY. ANY AND ALL UTILITIES NOT REMOVED BY THE UTILITY COMPANY SHALL BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN RIGHT-OF-WAY PERMIT AND NOTIFY THE CITY OF FRANKLIN ENGINEERING DEPARTMENT IN ADVANCE OF PERFORMING ANY WORK IN THE PUBLIC RIGHT-OF-WAY. RIGHT-OF-WAY PERMITS FOR WORK WITHIN THE SR 44 RIGHT-OF-WAY SHALL BE OBTAINED FROM INDOT.
3. UTILITIES ARE SHOWN TO BE APPROXIMATE AND SHALL BE RELOCATED AND/OR CAPPED AND ABANDONED BEFORE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. THE OWNER GETS THE FIRST RIGHT OF SALVAGE.
5. ALL DEMOLITION MATERIAL AND ALL REMAINING SALVAGEABLE MATERIAL IS THE PROPERTY OF THE DEMOLITION CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFFSITE.
6. ALL EXISTING SEPTIC SYSTEMS ARE TO BE LOCATED BY CONTRACTOR ON SITE AND REMOVED COMPLETELY.
7. THE CONTRACTOR SHALL OBTAIN ALL DEMOLITION PERMITS REQUIRED BY THE LOCAL AND STATE AGENCIES.
8. THE CONTRACTOR SHALL REMOVE ALL EXISTING FENCES LOCATED ON SITE, UNLESS OTHERWISE NOTED.
9. THE CONTRACTOR SHALL MAINTAIN STREETS FREE AND CLEAR OF SEDIMENT AND DEBRIS.
10. THE CONTRACTOR SHALL VERIFY WITH THE OWNER, ON ALL TREES WHICH ARE TO BE REMOVED.
11. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE STARTING ANY ON OR OFF SITEWORK.
12. ALL TEMPORARY BENCHMARK ELEVATIONS SHALL BE VERIFIED BEFORE STARTING ANY ON OR OFF SITEWORK.
13. A PERMIT FOR CLEARING MAY BE REQUIRED THROUGH STATE/FEDERAL AGENCIES FOR ANY CLEARING PERFORMED BETWEEN APRIL 1 AND OCTOBER 14

### SYMBOL LEGEND

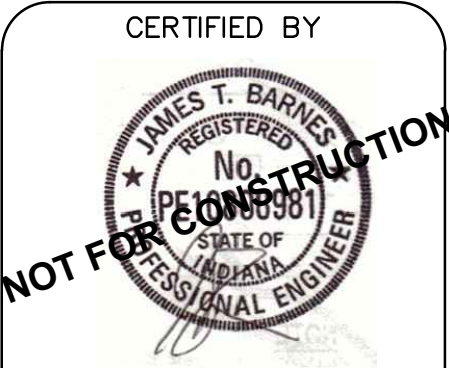
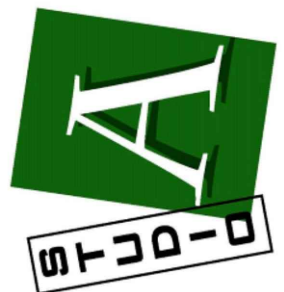
- ⊠ Beehive Inlet
- ⊠ Curb Inlet
- ⊠ Drainage Inlet
- ⊠ Drainage MH
- ⊠ Electric Box
- ⊠ Electric Meter Box
- ⊠ Fire Hydrant
- ⊠ Gas Marker
- ⊠ Ground Light
- ⊠ Hose Bib
- ⊠ Light Pole
- Post
- ⊠ Right of Way Marker
- ⊠ Sanitary MH
- ⊠ Sign
- ⊠ Telephone Handhole
- ⊠ Telephone Marker
- ⊠ Telephone Pedestal
- ⊠ Transformer
- ⊠ Tree
- ⊠ Water Marker
- ⊠ Water Meter
- ⊠ Water Valve
- e- Buried Electric Line
- g- Buried Gas Line
- w- Buried Water Line

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## DEMOLITION PLAN

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

REVISIONS	

SHEET NO.

C102



FILE PATH: C:\Studio A Projects\70028 FRANKLIN TECH PARK (THIS INFO COPIED ONTO CURRENT FILE ON A360 1-21-2018)\FTP GUARD SHACK.dwg PLOT SCALE: 1:1.7167 PLOT DATE: 1/9/2020 11:22:11 AM PLOTTED BY: ANMMO

EDGE OF PAVEMENT STATE ROAD 44 ASPHALT EASTERN EXTENT OF LIMITED ACCESS D.R. 181, PG. 351

PLAN KEY NOTES:

- (A) 6" BOLLARD

(B) GATE ARM AND ASSEMBLY

(C) 8' BLACK VINYL CHAIN LINK FENCE

(D) GUARD SHACK

(E) CHAIRBACK CURB AND GUTTER TYPE 1

(F) CHAIRBACK CURB AND GUTTER TYPE 2

(G) 32' ROLL GATE

(H) KEY PAD
- (I) PROPOSED MANHOLE

(J) FIRE HYDRANT ASSEMBLY

(K) (2) 18' ROLL GATES

(L) REPLACE EXISTING STORM CASTING

(M) GUARD HOUSE PAD AND INTEGRAL CURB

(N) HEAVY DUTY CONCRETE PAVEMENT

(O) 6" CONCRETE BARRIER CURB

(P) 6" CONCRETE PAD

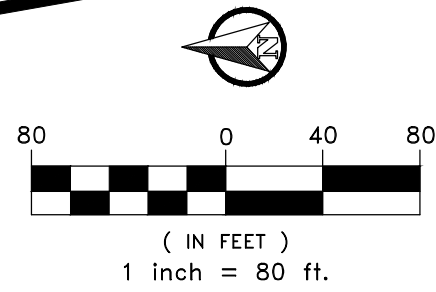
(Q) LIGHT POST

(R) CONCRETE SIDEWALK

PROPOSED  
BUILDING  
933,825 S.F.  
FFE 733.30

NORMAL POOL - 720.00  
10 YEAR FLOOD ELEVATION = 724.9  
6 YEAR FLOOD ELEVATION = 724.9  
10 YEAR FLOOD ELEVATION = 724.9

NORMAL POOL - 720.00  
10 YEAR FLOOD ELEVATION = 724.9  
6 YEAR FLOOD ELEVATION = 724.9  
10 YEAR FLOOD ELEVATION = 724.9



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FENCE LAYOUT PLAN

DATE:	12/5/2019
JOB NO.	170028
DRAWN BY:	AMM
CHECKED BY:	MM
REVISIONS	

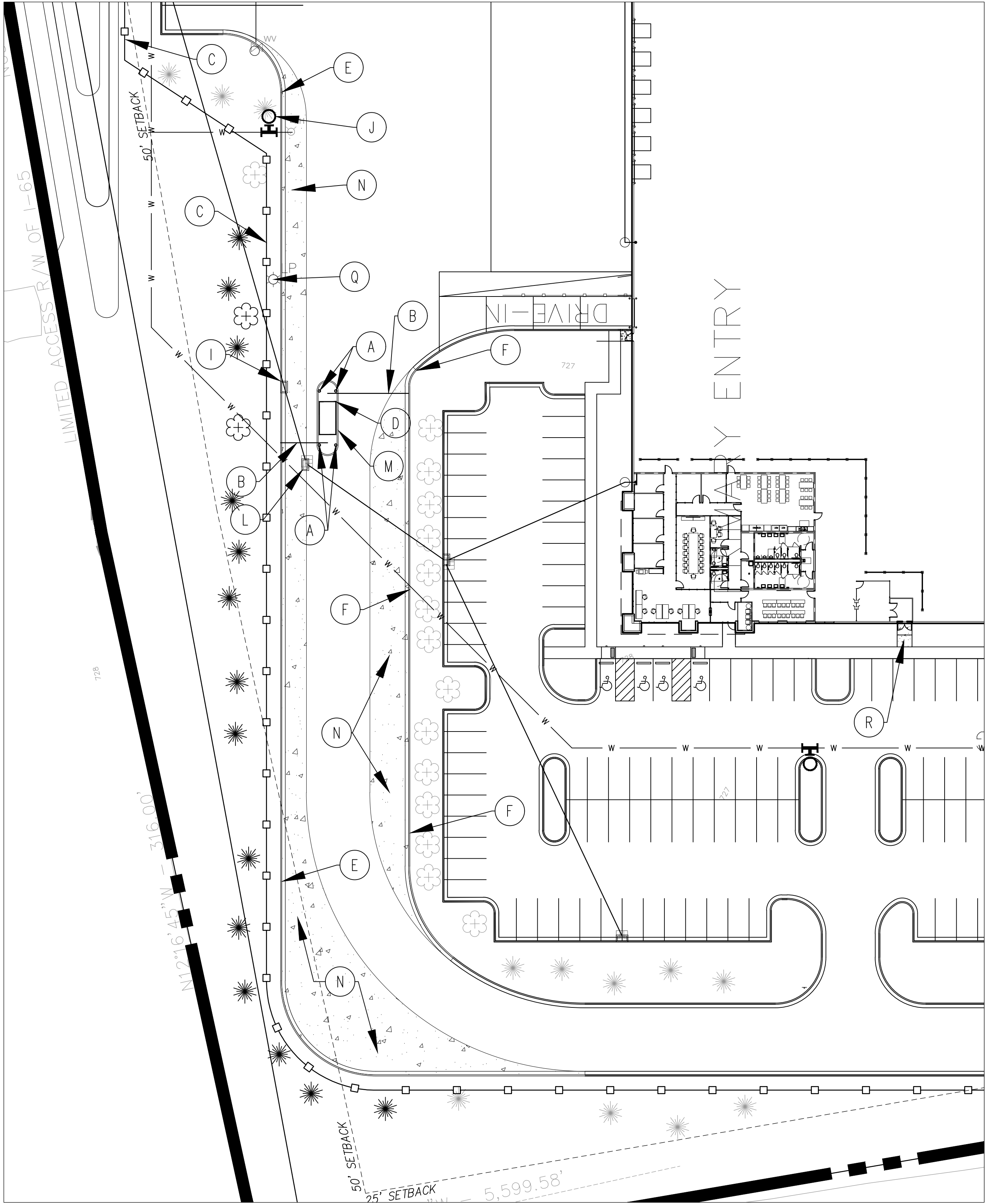
SHEET NO.  
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PROFESSIONAL ENGINEER

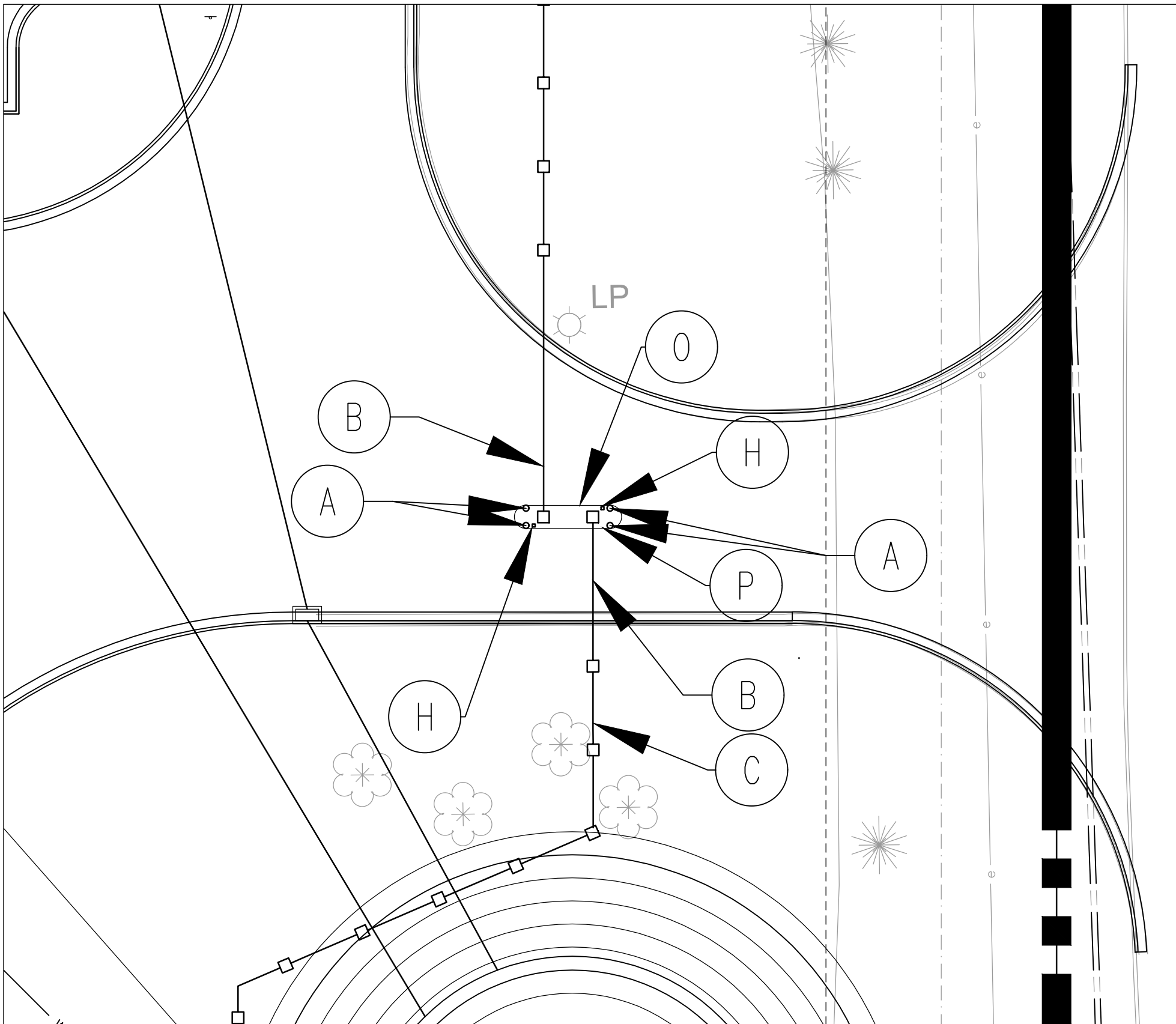
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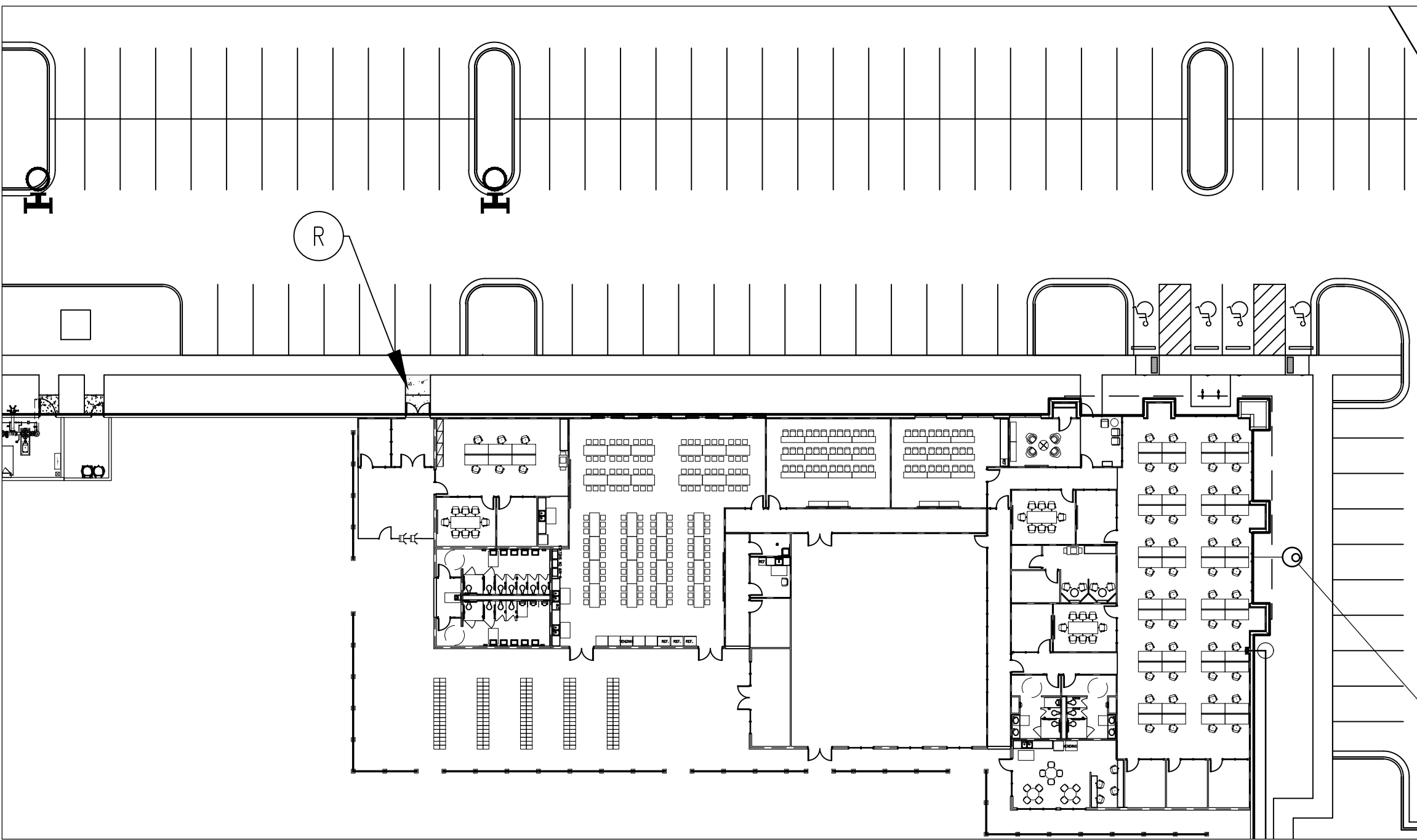
## SW CORNER



## NE ENTRANCE



## NE CORNER



### PLAN KEY NOTES:

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| (A) 6" BOLLARD                       | (I) PROPOSED MANHOLE                  |
| (B) GATE ARM AND ASSEMBLY            | (J) FIRE HYDRANT ASSEMBLY             |
| (C) 8' BLACK VINYL CHAIN LINK FENCE  | (K) (2) 18' ROLL GATES                |
| (D) GUARD SHACK                      | (L) REPLACE EXISTING STORM CASTING    |
| (E) CHAIRBACK CURB AND GUTTER TYPE 1 | (M) GUARD HOUSE PAD AND INTEGRAL CURB |
| (F) CHAIRBACK CURB AND GUTTER TYPE 2 | (N) HEAVY DUTY CONCRETE PAVEMENT      |
| (G) 32' ROLL GATE                    | (O) 6" CONCRETE BARRIER CURB          |
| (H) KEY PAD                          | (P) 6" CONCRETE PAD                   |
|                                      | (Q) LIGHT POST                        |
|                                      | (R) CONCRETE SIDEWALK                 |

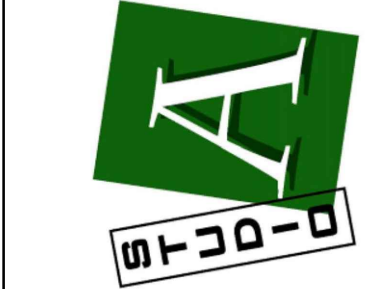
### PROPOSED LEGEND

- |   |  |
|---|--|
| ○ | = CLEANOUT                                 |
| — | = SSD LATERAL                              |
| — | = RIGHT-OF-WAY LINE                        |
| — | = STORM SEWER LINE                         |
| — | = SWALE                                    |
| — | = SANITARY SEWER LINE                      |
| — | = SANITARY SEWER MANHOLE                   |
| — | = SANITARY SEWER LATERAL                   |
| — | = FLOW DIRECTION                           |
| — | = EXISTING SPOT ELEVATION                  |
| — | = EXISTING CONTOURS                        |
| — | = PROPOSED ELEVATION                       |
| — | = STORM BEEHIVE INLET                      |
| — | = STORM INLET                              |
| — | = SUBSURFACE DRAIN AND SUMP LINE           |
| — | = GRANULAR BACKFILL                        |
| — | = CONCRETE END SECTION                     |
| — | = NORMAL POOL ELEVATION                    |
| — | = PROPOSED PAD ELEVATION                   |
| — | = INVERT                                   |
| — | = TOP OF CASTING / TOP OF CURB             |
| — | = INVERT                                   |
| — | = REINFORCED CONCRETE PIPE                 |
| — | = MANHOLE                                  |
| — | = STRUCTURE                                |
| — | = REGULATED DRAIN AND UTILITY EASEMENT     |
| — | = DRAINAGE AND UTILITY EASEMENT            |
| — | = SANITARY, DRAINAGE, AND UTILITY EASEMENT |
| — | = SANITARY SEWER                           |
| — | = HANDICAP RAMP                            |
| — | = MATCH EXISTING GRADE                     |
| — | = STORM SEWER                              |
| — | = SUBSURFACE DRAIN                         |
| — | = SANITARY SEWER PIPE                      |
| — | = MINIMUM PAD ELEVATION                    |
| — | = TYPICAL                                  |
| — | = PROPOSED                                 |
| — | = EXISTING                                 |
| — | = RADIUS                                   |
| — | = BACK TO BACK                             |
| — | = EXISTING                                 |
| — | = CLEANOUT                                 |

### SYMBOL LEGEND

- |   |                      |
|---|----------------------|
| — | Beehive Inlet        |
| — | Curb Inlet           |
| — | Drainage Inlet       |
| — | Drainage MH          |
| — | Electric Box         |
| — | Electric Meter Box   |
| — | Fire Hydrant         |
| — | Gas Marker           |
| — | Ground Light         |
| — | Hose Bib             |
| — | Light Pole           |
| — | Post                 |
| — | Right of Way Marker  |
| — | Sanitary MH          |
| — | Sign                 |
| — | Telephone Handhole   |
| — | Telephone Marker     |
| — | Telephone Pedestal   |
| — | Transformer          |
| — | Tree                 |
| — | Water Marker         |
| — | Water Meter          |
| — | Water Valve          |
| — | Buried Electric Line |
| — | Buried Gas Line      |
| — | Buried Water Line    |

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Franklin, Indiana 46131

## GUARD SHACK LAYOUT PLAN

"IT'S THE  
LAW"



Know what's Below  
Call before you dig.  
2 WORKING DAYS BEFORE YOU DIG.

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

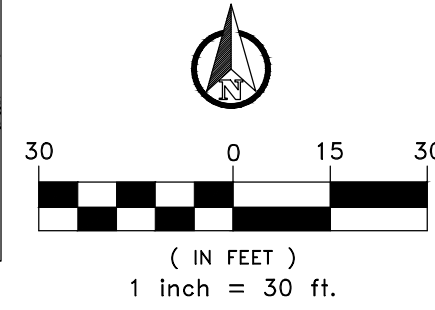
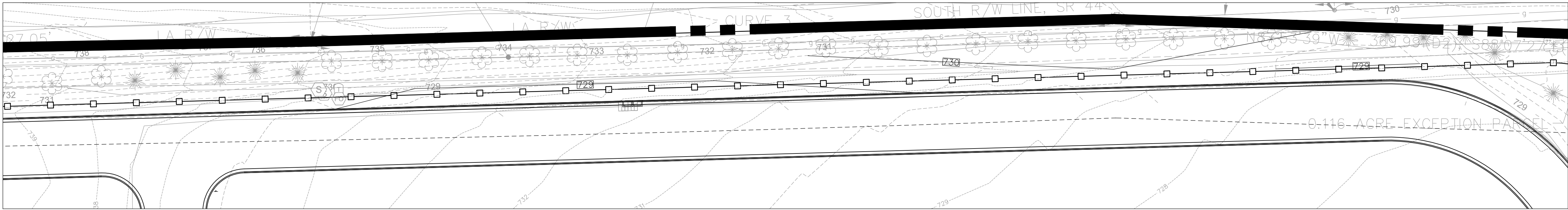
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**C201**

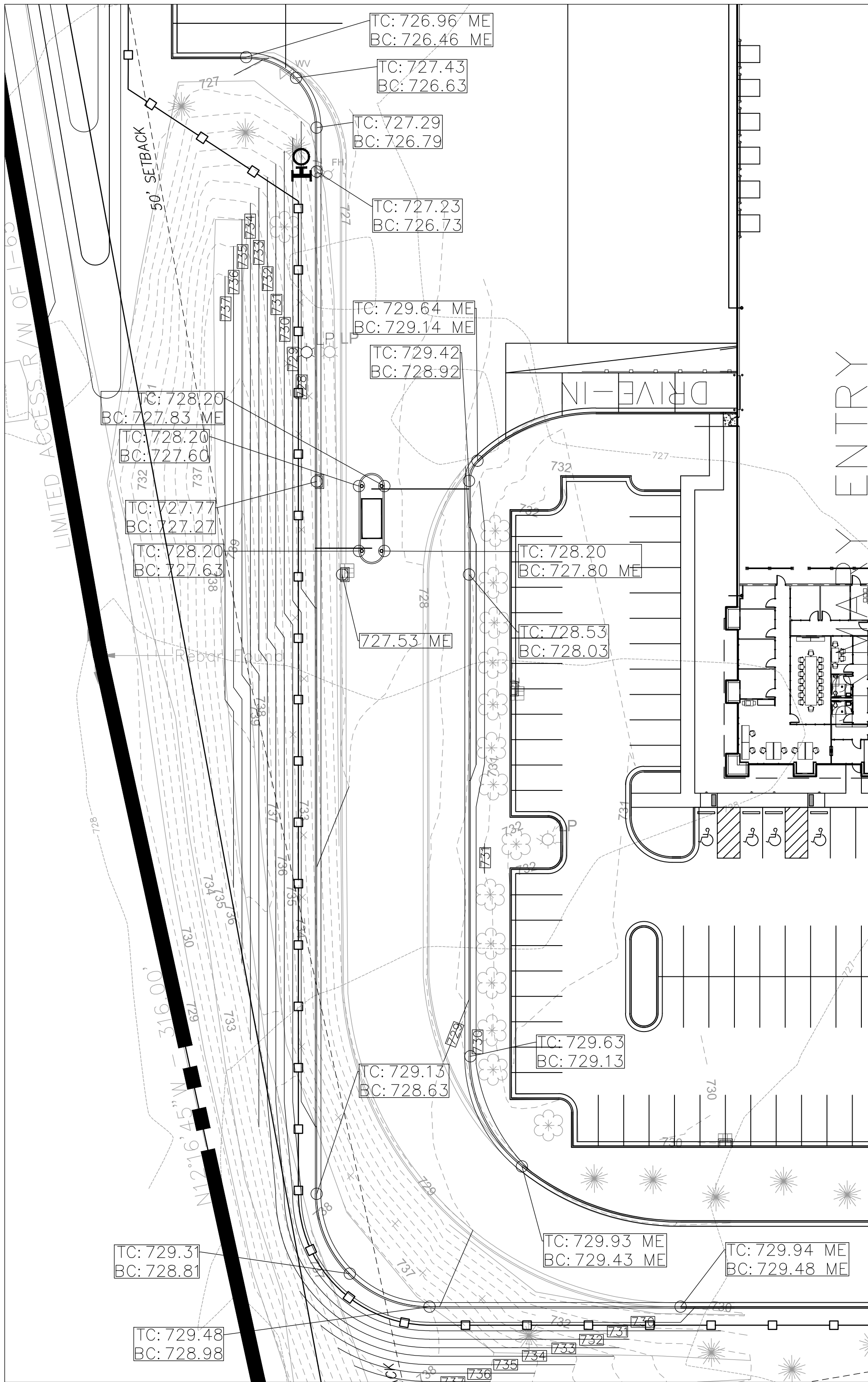


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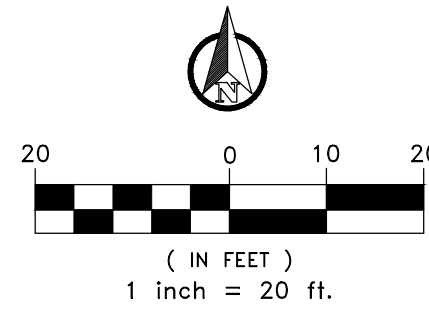
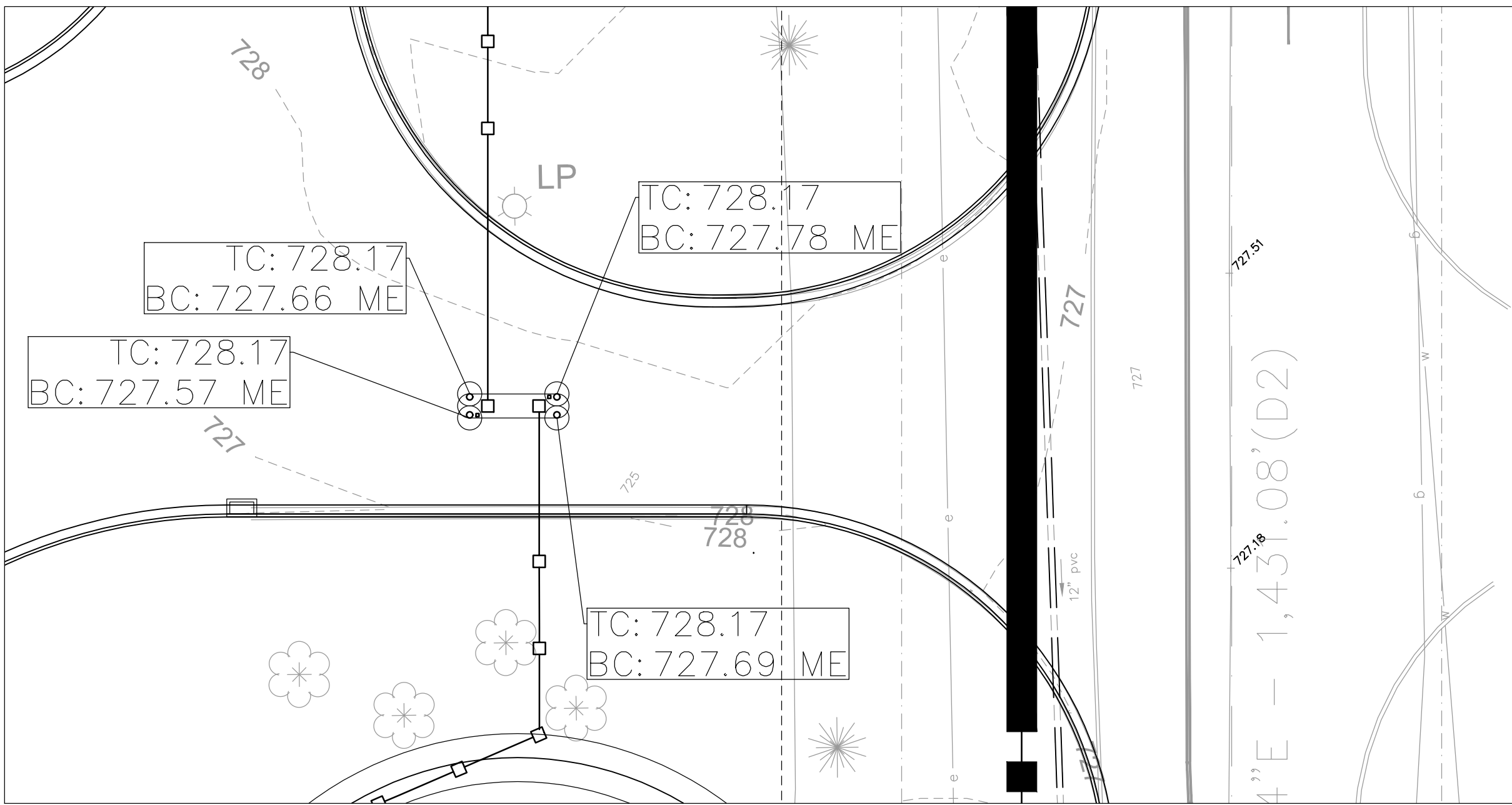
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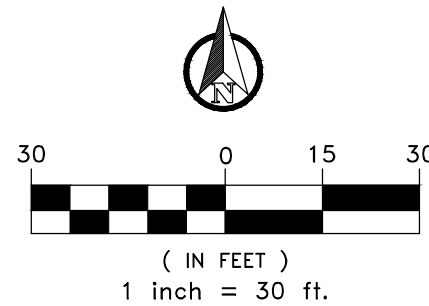
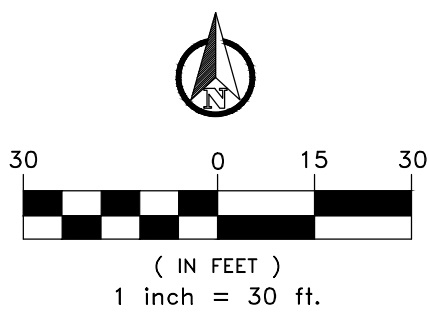
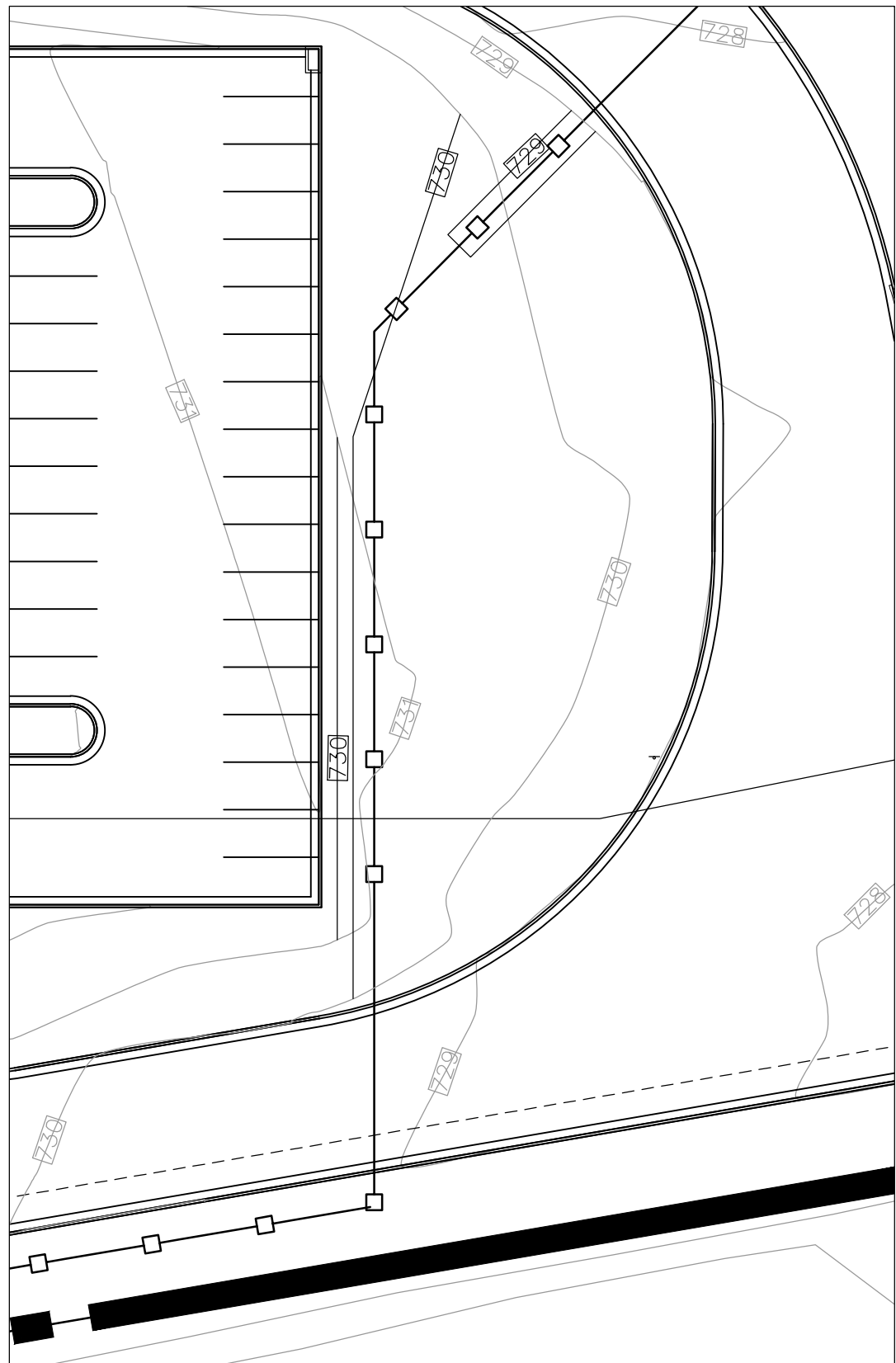
## SW CORNER



## NE ENTRANCE



## SE GATES



### PROPOSED LEGEND

	= CLEANOUT
	= SSD LATERAL
	= RIGHT-OF-WAY LINE
	= STORM SEWER LINE
	= SANITARY SEWER LINE
	= SANITARY SEWER MANHOLE
	= SANITARY SEWER LATERAL
	= FLOW DIRECTION
	= EXISTING SPOT ELEVATION
	= EXISTING CONTOURS
	= PROPOSED ELEVATION
	= STORM BEEHIVE INLET
	= STORM INLET
	= SUBSURFACE DRAIN AND SUMP LINE
	= GRANULAR BACKFILL
	= CONCRETE END SECTION
	= NORMAL POOL ELEVATION
	= PROPOSED PAD ELEVATION
	= TOP OF CASTING / TOP OF CURB
	= INVERT
	= REINFORCED CONCRETE PIPE
	= MANHOLE
	= STRUCTURE
	= REGULATED DRAIN AND UTILITY EASEMENT
	= DRAINAGE AND UTILITY EASEMENT
	= SANITARY, DRAINAGE, AND UTILITY EASEMENT
	= SANITARY SEWER
	= HANDICAP RAMP
	= MATCH EXISTING GRADE
	= STORM SEWER
	= SUBSURFACE DRAIN
	= SANITARY SEWER PIPE
	= MINIMUM PAD ELEVATION
	= TYPICAL
	= PROPOSED
	= EXISTING
	= RADIUS
	= BACK TO BACK
	= EXISTING
	= CLEANOUT

### SYMBOL LEGEND

	Beehive Inlet
	Curb Inlet
	Drainage Inlet
	Drainage MH
	Electric Box
	Electric Meter Box
	Fire Hydrant
	Gas Marker
	Ground Light
	Hose Bib
	Light Pole
	Post
	Right of Way Marker
	Sanitary MH
	Sign
	Telephone Handhole
	Telephone Marker
	Telephone Pedestal
	Transformer
	Tree
	Water Marker
	Water Meter
	Water Valve
	Buried Electric Line
	Buried Gas Line
	Buried Water Line

### GENERAL GRADING NOTES:

- 1) EARTHWORK AND GRADING SHALL NOT START UNTIL EROSION CONTROL MEASURES HAVE BEEN PROPERLY INSTALLED.
- 2) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926 SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING 5 FEET IN DEPTH.
- 3) PROVIDE POSITIVE DRAINAGE IN ALL AREAS. AFTER INSTALLATION CONTRACTOR TO TEST ALL AREAS FOR PONDING AND CORRECT ANY STANDING WATER CONDITIONS THAT ARE PRESENT.
- 4) ALL OF THE PROPOSED SPOT ELEVATIONS ARE THE FINAL GRADING AND PAVEMENT ELEVATIONS. SEE DETAIL AND SPECIFICATIONS TO DETERMINE THE SUBGRADE ELEVATIONS BELOW FINISH ELEVATIONS FOR CONSTRUCTION.
- 5) ALL SANITARY MANHOLES IN NON-PAVED AREAS TO BE 3" ABOVE GRADE.
- 6) THE SLOPE IN NON-PAVED AREAS SHALL BE 3:1 MAXIMUM.
- 7) ALL A.D.A. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT TO EXCEED 2% (1:50) SLOPE UNLESS NOTED OTHERWISE.
- 8) ALL SIDEWALKS AND CROSS SLOPED NOT TO EXCEED 2% (1:50) SLOPE UNLESS NOTED OTHERWISE.
- 9) PROVIDE SMOOTH TRANSITIONS FROM EXISTING AREAS TO NEW AREAS AS NECESSARY.

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PROJECT PIONEER  
180 BARTRAM PARKWAY  
Franklin, Indiana 46131

GRADING PLAN

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

REVISIONS

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PAVEMENT

- A. SCOPE OF WORK
1. The work required under this section includes all exterior concrete and bituminous paving and related items necessary to complete the work indicated on drawings and described in the specifications, including but not limited to:
- a. All drives, parking areas within contract limits
  - b. Curbs and gutters
  - c. Sidewalks, concrete slabs, exterior steps
- B. MATERIALS

1. Concrete: Concrete shall be ready-mixed and shall be a mix of proportioned fine and coarse aggregates with portions cement and water. Minimum cement content shall be 5 bags per cubic yard of concrete and maximum water content shall be 5.5 US gallons per sack of cement, including moisture in the aggregate. Slump for normal weight concrete shall be a maximum of 4 inches and a minimum of 2 inches. The slump of machine placed concrete shall be no less than 1-1/4 inches or more than 3 inches. Standard test ASTM C-143 shall be used to measure slump. Minimum compressive strength of concrete at 28 days shall be 4000 psi. All exterior concrete shall have air entrainment of 5% to 8% by volume per ASTM C-260. Re-tempering of delivered concrete shall not be permitted. Concrete shall be composed of:
- a. Portland cement: conforming to ASTM C-150, Type IA or type IIIA.
  - b. Aggregates: conforming to ASTM C-35.
  - c. Water: Shall be clear and free from injurious amounts of oils, acids, alkalis, organic materials or other deleterious substances.
2. Welded Steel Wire Fabric: Where required for concrete reinforcement shall conform to ASTM A185.
3. Pre-molded Joint Filler: Shall be non-extruding type meeting ASTM D-544, except that pre-molded joint filler used in concrete walk construction may be either non-extruding or resilient.
4. Bituminous Pavement Materials: All materials proposed for the construction of bituminous pavements shall comply with the Indiana Department of Transportation Standard Specifications, latest revisions.
5. Compacted Aggregate Sub-base
- a. If a certain type of aggregate is specified and labeled per the plans and/or details, then that aggregate shall meet and be in accordance with the INDOT Standard Specifications.
  - b. If the aggregate is not specified or labeled than it shall be crushed stone or gravel meeting the following requirements. Crushed gravel shall be a minimum of 35% crushed material. Fines shall be limited to a maximum of 8% of the total. Material shall be free from an excess of flat, elongated, thinly laminated soft or disintegrated pieces, and shall be free from fragments coated with dirt. Compacted aggregate shall have a gradation as presented below.

1-1/2"	100
1"	80-100
3/4"	70-90
3/8"	55-80
#4	35-60
#5	25-50
#30	2-30
#200	5-10

C. APPLICATION

1. Grading: Do any necessary grading in addition to that performed in accordance with EARTHWORK Section, to bring sub-grades, after final compaction, to the required grades and sections for site improvement.
2. Preparation of sub-grade: Remove spongy and otherwise unsuitable material and replace with stable material. No traffic shall be allowed on prepared sub-grade prior to paving.
3. Compaction of subgrade: Refer to Section 207 of the INDOT Standard Specification Manual.
4. Utility Structure: Check for correct elevation of all manhole covers, inlets, valve boxes and similar structures located within areas to be paved and mark, or have made any necessary adjustments to such structures.
5. Placing concrete:
- a. Sub-grade: Place concrete only on a moist, compacted sub-grade of base free from loose material. No concrete shall be placed on a muddy or frozen subgrade.
  - b. Forms: All forms shall be free from warp, light enough to prevent leakage and substantial enough to maintain their shape and position without springing or settling when concrete is placed. Forms shall be clean and smooth immediately before concreting.
  - c. Placing concrete: Concrete shall be deposited so as to require as little handling as practical. When concrete is to be placed at an atmospheric temperature of 35 degrees (F) or less, the Indiana Department of Transportation Standard Specifications, latest revision shall be followed.
6. Concrete Cub and Gutter:
- a. Expansion Joints shall be 1/2" thick pre-molded at ends of all returns and a maximum spacing of 100 feet.
  - b. Contraction Joints: Unless otherwise provided, contraction joints shall be joints spaced 10 feet on center.
  - c. Finish: Tamp and spread concrete as soon as placed, and fill any honeycombed places. Finish square corners to 1/4 inch radius or as otherwise required.
7. Concrete Walks and Exterior Steps:
- a. Slopes: Provide 1/4 inch per foot cross slope. Contractor shall make field adjustments in slopes at walk intersections as necessary to provide proper drainage.
  - b. Dimensions: Walks and steps shall be one course construction and of widths and thickness shown on the drawings.
  - c. Finish: Spread concrete and trowel with a steel trowel to a hard dense surface after surface water has disappeared. Apply medium broom finish and scribe control joints at 6 foot spacing. Provide 1/4 inch expansion joints where sidewalks intersect and at a maximum spacing of 48 feet along walks.
8. Curing Concrete: Except as otherwise specified, cure all concrete by one of the methods described in the Indiana Department of Transportation Standard Specifications, latest revision.
9. Bituminous Pavement: Hot asphalt concrete pavement shall be as specified in the Indiana Department of Transportation Standard Specifications, latest revisions. Paving will not be permitted during unfavorable weather or when the temperature is 40 degrees (F) or below and falling.
10. Compacted Aggregate Sub-base: The thickness shown on the drawings is the minimum thickness of the fully compacted sub-base: Compaction shall be accomplished by rolling with a smooth wheeled roller weighing 8 to 10 tons. Compact to 95% compaction using Standard Testing Procedures. Along curbs, headers and walls and at all places not accessible to the roller, the aggregate material shall be tamped with mechanical tampers.

EARTHWORK

A. SCOPE OF WORK

1. Extent: The work required under this section consists of all excavating, filling, rough grading and related items necessary to complete the work indicated on the drawings and described in the specifications. The Contractor shall notify, in writing, the Owners and the Engineer of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.
- a. In general, the items of work to be performed under this section shall include clearing and grubbing, removal of trees and stumps (where required), protection of trees to remain, stripping and storage of topsoil, fill, compaction and rough grading of entire site as indicated on the drawings.
  - b. Excavated material that is suitable may be used for fill. All unsuitable material and all surplus excavated material not required shall be removed from the site by the Contractor. The location of dump and length of haul shall be the Contractor's responsibility.
  - c. Provide and place any additional fill material from off the site as may be necessary to produce the grades required. Fill obtained from offsite shall be of kind and quality as specified herein, and as approved by the Engineer & Owner.

2. The Contractors shall accept the site as he finds it and shall remove all trash, rubbish and debris from the site prior to starting excavation.
3. Work not included: The following items of related work are specified and included in other sections of these specifications.
- a. Excavation, grading and backfilling for utility lines.
  - b. Storm drainage systems.
  - c. Sanitary sewer systems.
  - d. Water supply systems.
  - e. Drives and paving.

B. BENCHMARKS

1. Maintain carefully all bench marks, monuments and other reference points. If disturbed or destroyed, replace as directed by the Engineer.

C. REMOVAL OF TREES

1. Remove all trees and stumps from area to be occupied by road and surfaced areas. Removal of trees outside these areas shall only be done as noted on drawings or approved by the Owner.
2. All brush, stumps, wood and other refuse from the trees shall be removed from the site or burned with proper permits (where applicable).

D. PROTECTION OF TREES

1. General Protection: the Contractor shall be responsible for the protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any work is started; do not stockpile within branch spread. Remove interfering branches without injury to trunks and cover scars with tree paint.

E. STRIPPING OF TOPSOIL

1. Remove topsoil to a depth of 6 inches (or as indicated by Owner's Geotechnical Engineer) from the areas to be occupied by roads, walks, buildings, and parking areas. Pile and store topsoil at a location where it will not interfere with construction operations. Top soil shall be reasonable free from subsoil, debris and stones larger than 2 inches.
2. Rules and regulations governing the respective utilities shall be observed in executing all work under this section.
3. It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his/her phase of the work. It shall be the contractor's responsibility to contact the owners of the various utilities before work is started. The contractor shall notify, in writing, the owners or the engineers of any changes, errors or omissions found on these plans, and/or in the field before work is started or resumes.
4. Where active utilities are encountered but not shown on the drawings, the Contractor shall notify the Utility Company, Owner, and Engineer prior to proceeding with any work. An appropriate course of action shall be agreed upon by the Utility Company, Owner and Engineer prior to work commencing.
5. Inactive and abandoned utilities encountered in excavating and grading operations shall be reported to the Engineer. They shall be removed, plugged or capped as directed by the Engineer and/or Utility Company.

G. SITE GRADING

1. Grades: Perform all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawings. Undercut open areas 4" for topsoil.
2. Rough grading: the tolerance for paved areas shall not exceed 0.10 feet above established subgrade. All other areas shall not exceed 0.10 feet plus or minus the established grade. Provide rounding at top and bottom of banks and other break in grade. All open areas shall be graded a minimum of 0.5% and a maximum of 3H:1V slope.
3. Sub-grade shall be proof rolled with suitable material. Contactor shall coordinate the proof roll procedure with the agency having jurisdiction to ensure proper representation is in attendance for the test.
4. Sub-grade for building areas shall be compacted to a minimum compaction of 95% Modified Proctor Density or per the Architectural/Structural Construction Plans for the corresponding building area. The Architectural/Structural plans shall govern.
5. Sub-grade for streets and paved areas - See PAVEMENT specifications.
6. See PAVEMENT section for additional information.
7. All fill material shall be formed from soil free of deleterious material. Prior to placement of fill, a sample of the proposed material shall be submitted to the Owner's Geotechnical Engineer for approval. The fill material shall be placed in layers not to exceed 8" in loose thickness and shall be spread and compacted at the proper moisture content.
8. All fill material in areas outside of building and pavement areas shall be compacted lightly with each lift and protected from erosion. Areas of building construction shall have suitable fill material placed and compacted in accordance with the Soils Engineer's report and per sub-section 4 described above in the Section.
9. The Contractor shall verify all earthwork quantities prior to the start of construction. The Contractor shall notify the Owner and Engineer in writing if excess or shortage of earth quantities is encountered and verify requirements for stockpiling, removal or importing earth. Owner and Engineer hereby reserve the right to allow minor adjustments in proposed grades to reduce an earth quantity disparity.

H. SEEDING PREPARATION

1. Contractor shall resolve any surface or subsurface drainage problems and construct permanent erosion control structures.
2. Remove all rocks, roots or other materials that may interfere with seedbed preparation.
3. Perform the major filling, shaping and smoothing of gullied or severely eroded areas.
4. Have soil tested to check pH and fertility levels. Apply lime at rate specified in seeding specifications on the plans.
5. Work all lime and fertilized into the soils to a depth of 2-3 inches with a small disk, harrow or rake operated across the slope as much as possible.
6. Firm the soil bed where possible. Do not over pack the soil to ensure compacting does not restrict water and root penetration into the soil.

STORM SEWER SYSTEMS

A. SCOPE OF WORK

1. The work under this section includes all storm sewers, storm manholes, storm water inlets, and related items, including excavating and backfilling, necessary to complete the work shown on the drawings.
2. All work under this section shall be in accordance with the **City of Franklin** Stormwater Standards and Specifications unless specifically noted otherwise. In the event requirements provided herein conflict with the aforementioned Standards, the more stringent provisions shall be used.

B. MATERIALS

1. Storm Sewers:
- a. Reinforced concrete sewer pipe shall conform to ASTM C-76 class 3 (unless otherwise noted) latest revision with joints and gaskets conforming to ASTM C-443 latest revision.
  - b. High Density Polyethylene Pipe-HDPE
    - 1) Pipe shall meet Type 5 pipe under AASTO M294 for sizes 12 inches to 36 inches, and AASHTO MP5 for 42 inches and 48 inches.
    - 2) Flexible gasket joints shall be compression type so that when assembled, the gasket inside the machined groove on the pipe spigot will be compressed radially in the pipe bell to form a soil tight seal for all soil types and groundwater conditions.
    - 3) Gaskets shall conform to all requirements of ASTM F-447.
2. Manholes:

- a. Precast reinforced concrete manhole sections shall conform to ASTM C-478 latest revision.
- b. Castings shall be of uniform quality, free from blow holes, porosity, hard spots, shrinkage distortion or other defects. They shall be smooth and well-cleaned by shotblasting or by some other approved method. They shall be coated with asphalt paint which shall result in a smooth coating, tough and tenacious when cold, not tacky or brittle. They shall be grey iron meeting ASTM A-48 latest revision.
- c. Joints: manhole sections shall be jointed with rubber type gaskets. The rubber type gaskets shall meet ASTM C-443 latest revision.

3. Sub-surface/Underdrains:
- a. Perforated plastic pipe sub drains shall conform to ASTM D-3034 SDR 35, ASTM D-2729, or ASTM F-405.
4. PE Pipe and Fittings
- a. Corrugated PE Drainage Pipe and Fittings NPS 12 (ON 250) and smaller; AASHTO M 252M, for coupling joints.
    - 1) Silt-tight couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
    - 2) Soil-tight Couplings: AASHTO M 252M, corrugated, matching tube and fittings.
    - 3) Type S, double walled with smooth waterway.
  - b. Corrugated PE Pipe and Fittings NPS 12 to NPS 48 (DN 250 to DN 1200); AASHTO M 294M, Type S, with smooth waterway for coupling joints.
    - 1) Silt-tight couplings: PE sleeve with ASTM S 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
    - 2) Soil-tight Couplings: AASHTO M 294M, corrugated, matching pipe and fittings.
  - c. Manhole Steps
    - 1) Manhole steps shall be polypropylene, polypropylene coated steel reinforcing, or an approved non-corrosive fiberglass material. The copolymer polypropylene shall meet the requirements of ASTM D-4101 reinforced with deformed 3/8" minimum diameter reinforcing steel conforming to the requirements of ASTM 1-61S, grade 60.

C. APPLICATION

1. Permits and Codes: This section is intended to provide the Contractor with a basis for bidding purposes and general information. The Contractor shall be responsible for ensuring their bids, materials and workmanship are in accordance with local jurisdictional requirements. Contractor shall furnish all bonds necessary to get permits for cuts and connections to existing sewers.
2. Local Standards: The term "Local Standards" as used herein means the standards of design and construction of the respective municipal department or utility company.
3. Existing improvements: The Contractor shall maintain in operating condition all active utilities, sewers and other drains encountered in the sewer installation. Contractor shall repair to the satisfaction of the Owner/Utility Company any damage to existing active improvements at no additional cost to Owner.
4. Workmanship: Shall conform to all local, state and national codes and to be approved by all local and state agencies having jurisdiction.
5. Trenching: Lay all pipe in open trenches, except when the local authority gives written permission for boring/tunneling. Open the trench sufficiently ahead of pipe-laying to reveal any obstructions. The minimum width of the trench shall be the outside pipe diameter multiplied by 1.25, plus 12 inches (min). Sheet and brace trench as necessary to protect workmen and adjacent structures. All trenching to comply with Occupational Safety and Health Administration Standards. Keep trenches free from water while construction is in progress. Under no circumstances shall construction activities commence in standing water. Conduct the discharge from trench dewatering to appropriate drains or natural drainage channels.
6. Special Supports: Whenever, in the opinion of the Engineer, the soil at or below the pipe grade is unsuitable for supporting sewers and appurtenances specified in this section, such special support, in addition to those shown or specified, shall be provided as the Engineer may direct, and the contract will be adjusted.
7. Bedding: Bedding material shall be compacted No. 8 crushed stone or No. 8 fractured face aggregate meeting INDOT Standard Specifications and shall be placed in the trench bottom such that after the pipe has been placed to grade and line, there remains a minimum depth of material below the outside pipe wall. Refer to the tables below.

Pipe Size	D(MIN.)
27" & Smaller	3
30" to 60"	4
66" & Larger	6

D(MIN) = BEDDING BELOW PIPE

Pipe size	8"-15"	18" & over
Bedding below pipe	0.0/4 MIN=4"	0.0/4 MAX=8"

- a. HDPE/Flexible Pipe
- No. 8 crushed stone or No.9 fractured face aggregate meeting INDOT specifications shall be placed around the sides of the pipe up to the sides of the pipe to the springline (1/2 the Outside Diameter). This material shall be shovel sliced or otherwise carefully placed and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids. From the springline to 12" above the top of the pipe bedding shall be added in 6" lifts "walked" in for compaction. Backfilling of the remainder of the trench shall be as specified in the next Section.
- b. Reinforced Concrete Pipe (RCP)
- No. 8 crushed stone or No. 8 fractured face aggregate meeting IDNOT specifications shall be placed around the sides of the pipe up to the sides of the pipe to the springline (1/2 the Outside Diameter). This material shall be shovel sliced or otherwise carefully placed and "walked" or hand tamped in to ensure compaction of the haunch area and complete filling of all voids. Backfilling of the remainder of the trench shall be as specified in the next Section.
8. Backfill: The following materials shall be used to backfill the trenches in accordance with and in the manner indicated by the requirements specified herein:
- a. Granular Backfill: Granular backfill material shall be B Borrow or Structural Backfill in accordance with Section 211 of INDOT Standard Specifications. Backfill under and within 5' of walks, parking areas, driveways, and streets shall be granular material only.
  - b. Non-Granular Backfill: In areas not requiring granular backfill material, the trench shall be carefully backfilled with clean fill material free of rocks larger than 6" in diameter, frozen lumps of soil, wood or other extraneous material.
9. Compaction: granular Backfill compaction shall be in accordance with Section 211 of the INDOT Standard Specifications. Bedding and haunching shall be compacted to 95% standard proctor density for the entire depth of excavation.
10. Manhole Inverts: Construct manhole flow channels of concrete, smoothly finished and if semi-circular section conforming to the inside diameter of the connecting sewers. Make changes in size or grade gradually and changes in direction by true curves.
11. Utilities: It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his phase of the work. It shall also be the contractor's responsibility to contact the owners of the various utilities before work is started. The contractor shall notify, in writing, the owners or the engineer of any changes, errors or omissions found on these plans or in the field before work is started or resumed.

DEWATERING AND CONTROL OF SURFACE WATER

Whenever groundwater is encountered, the CONTRACTOR shall make every practical effort to secure a dry trench bottom before laying pipe. The CONTRACTOR shall provide, install and operate sufficient trenches, sumps, pumps, hose, piping, wall points, etc. to depress and maintain the groundwater level below the base of the excavation. If the CONTRACTOR is unable to remove the standing water in the trench, the CONTRACTOR shall over-excavate the proposed bottom grade of the sewer bedding, and place not less than 3" of No. 8 crushed stone in the over-excavated areas.

The CONTRACTOR shall keep the site free of surface water at all times and shall install drainage ditches, dikes, pumps, and perform other work necessary to divert or remove rainfall and other accumulation of surface water from excavations. The diversion and removal of surface and/or groundwater shall be performed in a manner which will prevent the accumulation of water within the construction areas. UNDER NO CIRCUMSTANCE SHALL SURFACE WATER AND/OR GROUDNATER BE DISCHARGED TO, DISPOSED OF, OR ALLOWED TO FLOW INTO AN ACTIVE SANITARY SEWER SYSTEM.

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PROJECT PIONEER  
180 BARTRAM PARKWAY  
Franklin, Indiana 46131

GENERAL SPECIFICATIONS

DATE:	12/5/2019
JOB NO.	170028
DRAWN BY:	AMM
CHECKED BY:	MM

REVISIONS

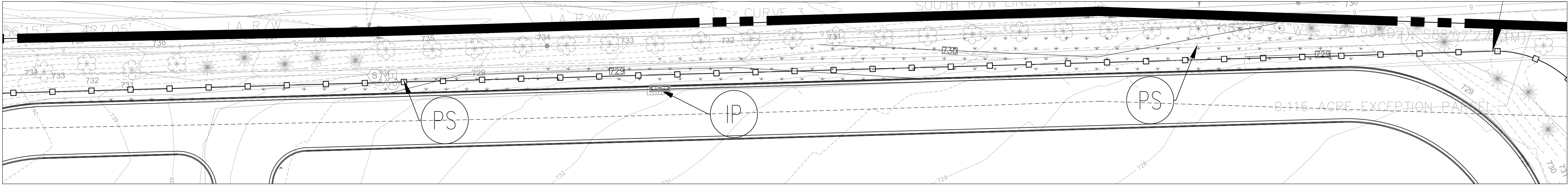

SHEET NO.

C502



FILE PATH: C:\Studio A Projects\170028 FRANKLIN TECH PARK (THIS INFO COPIED ONTO CURRENT FILE ON A360 1-21-2018)\FTP GUARD SHACK.dwg PLOT SCALE: 1:1.7167 PLOT DATE: 1/9/2020 11:23:31 AM PLOTTED BY: ANNO

# NORTH BOUNDRY



## EROSION CONTROL LEGEND

- LIMITS OF DISTURBANCE
- SF --- PROPOSED SILT FENCE SEE DETAIL
- SWALE FLOWLINE
- CE --- PROPOSED GRAVEL CONSTRUCTION ENTRANCE SEE DETAIL
- TS --- TEMPORARY SEEDING USE PLANTING CHART
- PS --- PERMANENT SEEDING SEE DETAIL SHEET
- EB --- EROSION CONTROL BLANKET WITH PERMANENT SEEDING N.A.G. \$75 IN SWAIL, \$150 IN LAKE SLOPES, BERMES AND ALL OTHER SLOPES. SEE DETAIL SHEET
- CS --- PERMIT POSTING, CONCRETE WASHOUT AREA, DUMPSTER
- RC --- ROCK CHUTE OUTLET PROTECTION SEE DETAIL
- IP --- DANDY SACK INLET PROTECTION
- SR --- WELDED WIRE MONO FILAMENT (SILT RING) SEE DETAIL
- RD --- ROCK CHECK DAM
- WO --- TRUCK WASHOUT AREA SHALL CONSIST OF A 20 CU/YD SEALED DUMPSTER WITH A 10 MIN PLASTIC LINER. DUMPSTER SHALL HAVE A COVER TO KEEP OUT RAIN AND FOR HAULING. DUMPSTER SHALL BE MARKED AS "WASH OUT".
- OP --- ROCK DONUT OUTLET PROTECTION
- TD --- TRASH DUMPSTER SHALL CONSIST OF A 20 CU/YD DUMPSTER WITH COVER
- SB --- NOI AND PERMIT SIGN BOARD

## EROSION CONTROL NOTES:

- 1) CONTRACTOR SHALL CONTACT THE JOHNSON COUNTY MS4 A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY DISTURBANCE ACTIVITIES.
- 2) ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE FIELD INSPECTOR.
- 3) THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIALS IN THE STREET.
- 4) ALL EROSION CONTROL MATERIALS TO BE APPROVED BY JOHNSON COUNTY MS4 PRIOR TO INSTALLATION.

THE CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION AND MAINTENANCE OF EROSION CONTROL AND STORM WATER PREVENTION FOR THE PROJECT AREA:

CONTRACTOR: NAME: ADDRESS: PHONE: EMAIL: LIST OF QUALIFICATIONS:

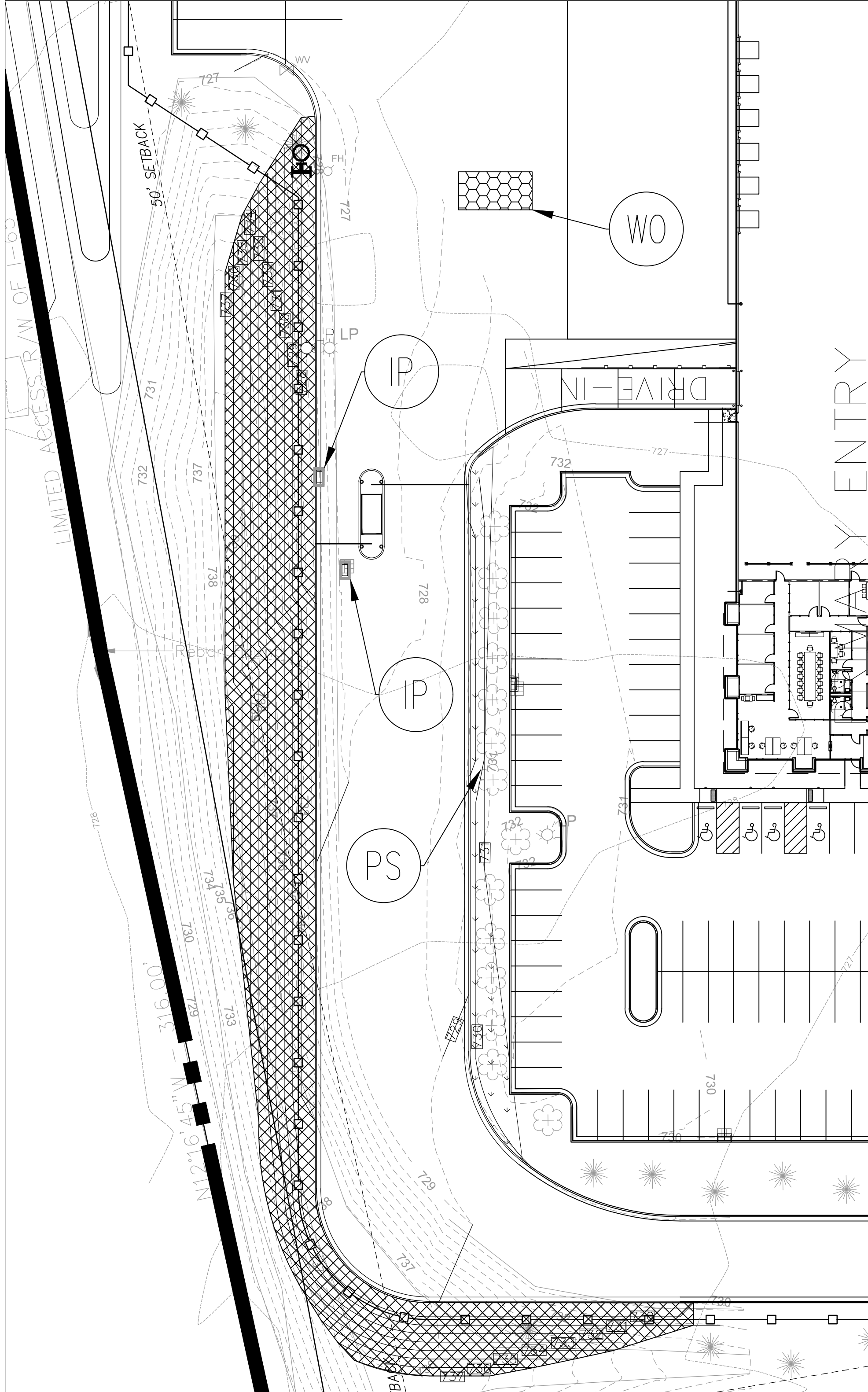
CONTRACTOR IS TO INFORM THE JOHNSON COUNTY MS4 OF WHO THIS STORMWATER POLLUTION INDIVIDUAL IS AT THE PRECONSTRUCTION MEETING PRIOR TO ANY EARTH DISTURBING AND CONSTRUCTION ACTIVITIES.

THE JOHNSON COUNTY MS4 STORMWATER MANUAL, DESIGN AND CONSTRUCTION STANDARDS, ALONG WITH THE INDIANA STORMWATER MANUAL AND THE NRCS AND THE FIELD OFFICE TECHNICAL GUIDE SHALL BE USED IN CONJUNCTION WITH THIS SET OF EROSION CONTROL PLANS.

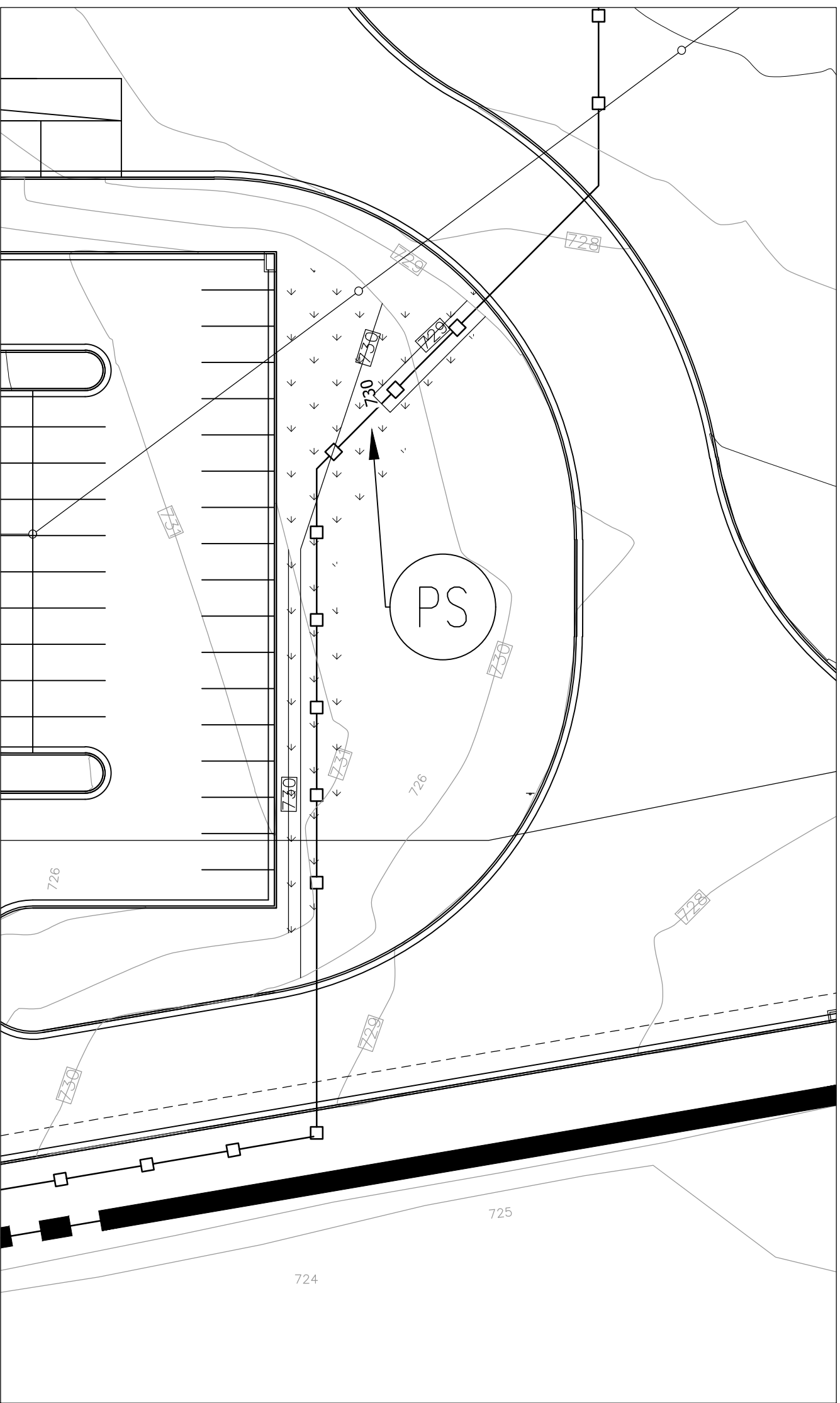
ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH 5/9 IDEM-INDIANA STORM WATER QUALITY MANUAL, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE MANUAL SHALL NOT ALLEVATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE MANUAL.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

# SW CORNER



# SE GATES



## PROPOSED LEGEND

- = CLEANOUT
- = SSD LATERAL
- = RIGHT-OF-WAY LINE
- = STORM SEWER LINE
- = SWALE
- = SANITARY SEWER LINE
- = SANITARY SEWER MANHOLE
- = SANITARY SEWER LATERAL
- = FLOW DIRECTION
- = EXISTING SPOT ELEVATION
- = EXISTING CONTOURS
- = PROPOSED ELEVATION
- = STORM BEEHIVE INLET
- = STORM INLET
- = SUBSURFACE DRAIN
- = AND SUMP LINE
- = GRANULAR BACKFILL
- = CONCRETE END SECTION
- = PROPOSED PAD ELEVATION
- = NORMAL POOL ELEVATION
- = TOP OF CASTING / TOP OF CURB
- = INVERT
- = REINFORCED CONCRETE PIPE
- = MANHOLE
- = STRUCTURE
- = REGULATED DRAIN AND UTILITY EASEMENT
- = DRAINAGE AND UTILITY EASEMENT
- = SANITARY, DRAINAGE, AND UTILITY EASEMENT
- = SANITARY SEWER
- = HANDICAP RAMP
- = MATCH EXISTING GRADE
- = STORM SEWER
- = SUBSURFACE DRAIN
- = SANITARY SEWER PIPE
- = MINIMUM PAD ELEVATION
- = TYPICAL
- = PROPOSED
- = EXISTING
- = RADIUS
- = BACK TO BACK
- = EXISTING
- = CLEANOUT

"IT'S THE LAW"



Know what's Below  
Call before you dig.  
2 WORKING DAYS BEFORE YOU DIG.

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PROJECT PIONEER  
180 BARTRAM PARKWAY  
Franklin, Indiana 46131

# EROSION CONTROL PLAN

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

REVISIONS	

SHEET NO.

C701



### SILT FENCE LOCATION

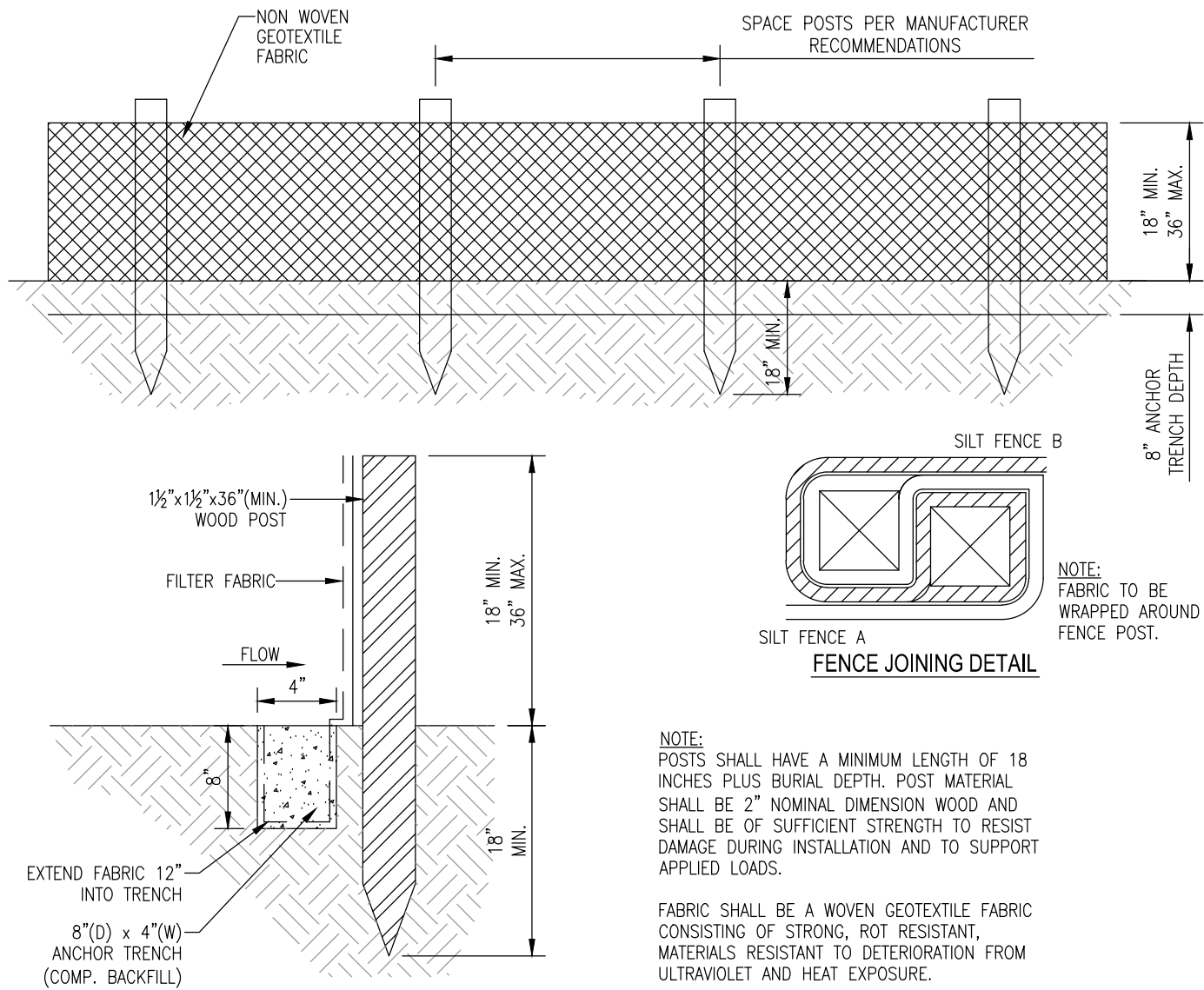
- Installed parallel to the slope contour.
- Minimum of 10 feet beyond the toe of slope to provide a broad, shallow sediment pool.
- Accessible for maintenance (removal of sediment and silt fence repair).

### INSTALLATION

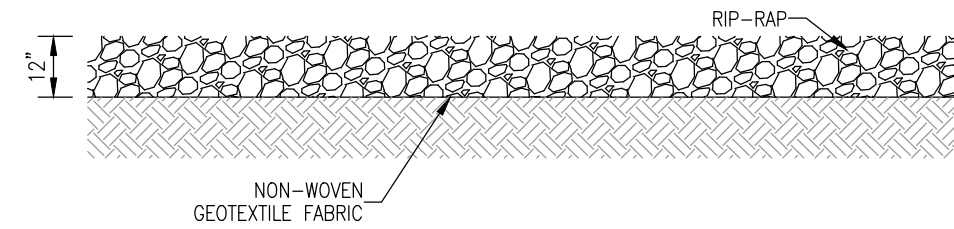
- Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point.
- Excavate an eight-inch deep by four-inch wide trench along the entire length of the fence line. Installation by plowing is also acceptable.
- Install the 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.
- 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. (If it is necessary to join the ends of two fences, use the wrap joint method shown).
- Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up-slope side of the trench.
- Backfill the trench with soil material and compact it in place.

### MAINTENANCE

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Note: All repairs should meet specifications as outlined within this measure. Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.



SILT FENCE CONSTRUCTION  
NOT TO SCALE



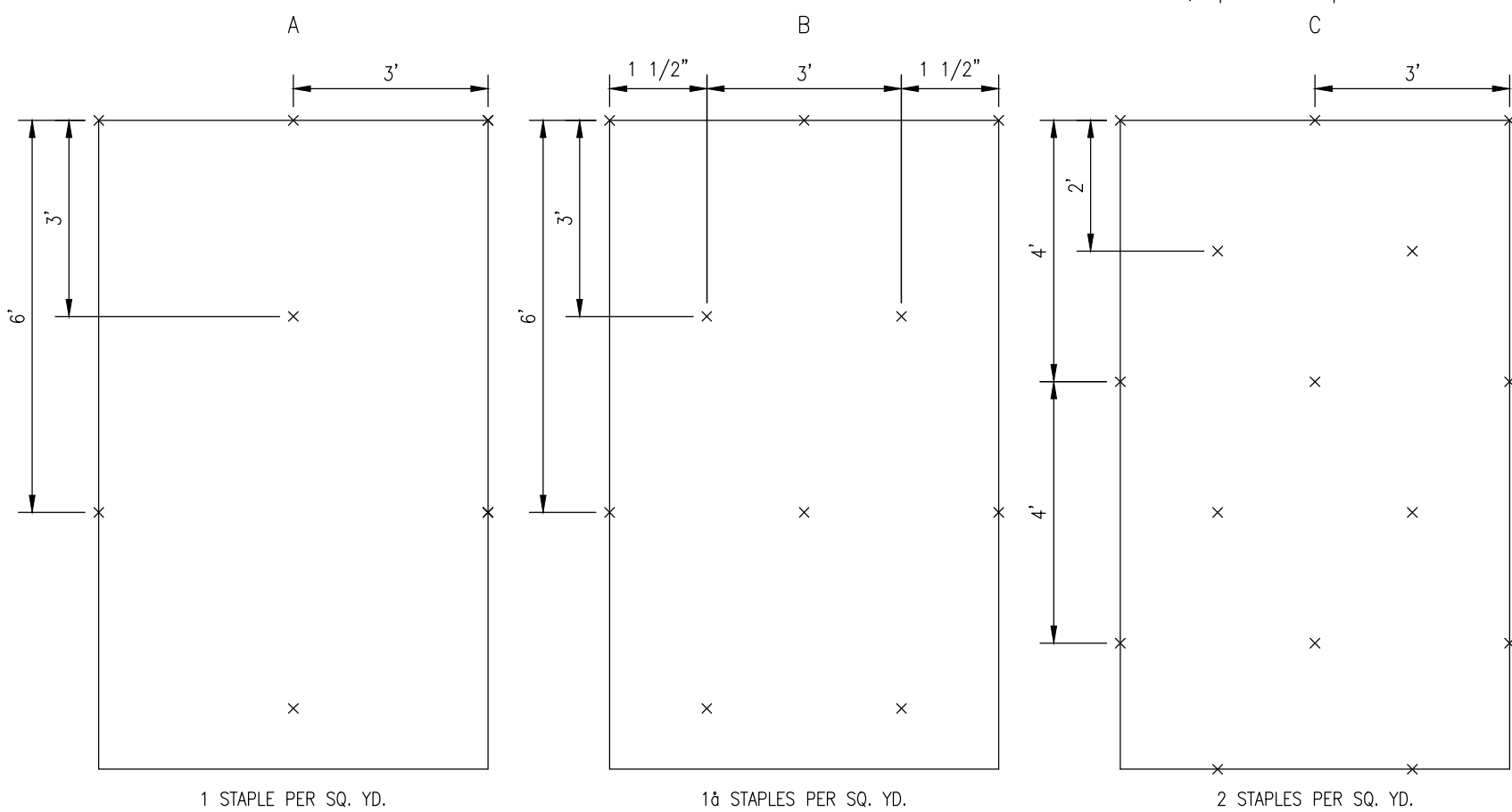
RIVER COBBLE SCOUR PROTECTION DETAIL  
NOT TO SCALE

### Erosion Control Blanket

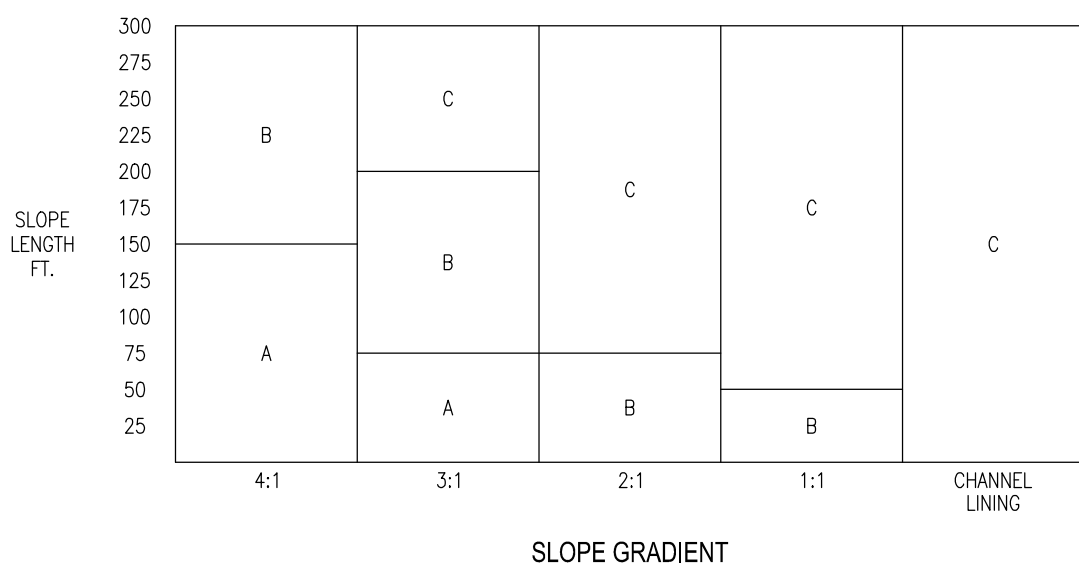
- Installation
- Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
  - Prepare the seedbed, add soil amendments, and permanently seed the area immediately following seedbed preparation.
  - Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations.
  - Tuck the uppermost edge of the upper blankets into a check slot (silt trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
  - Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

### Maintenance

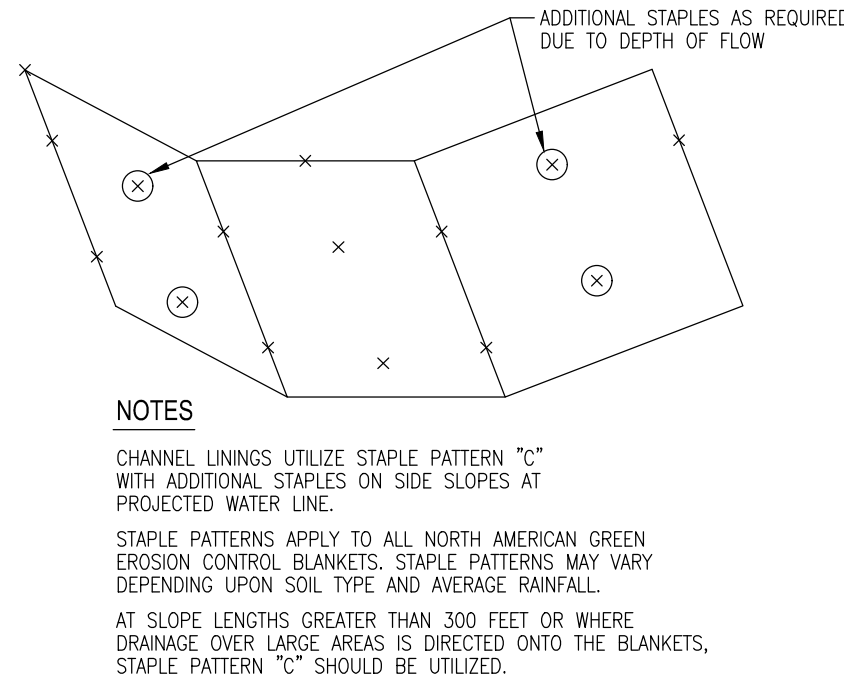
- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement of the blanket.
- If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.



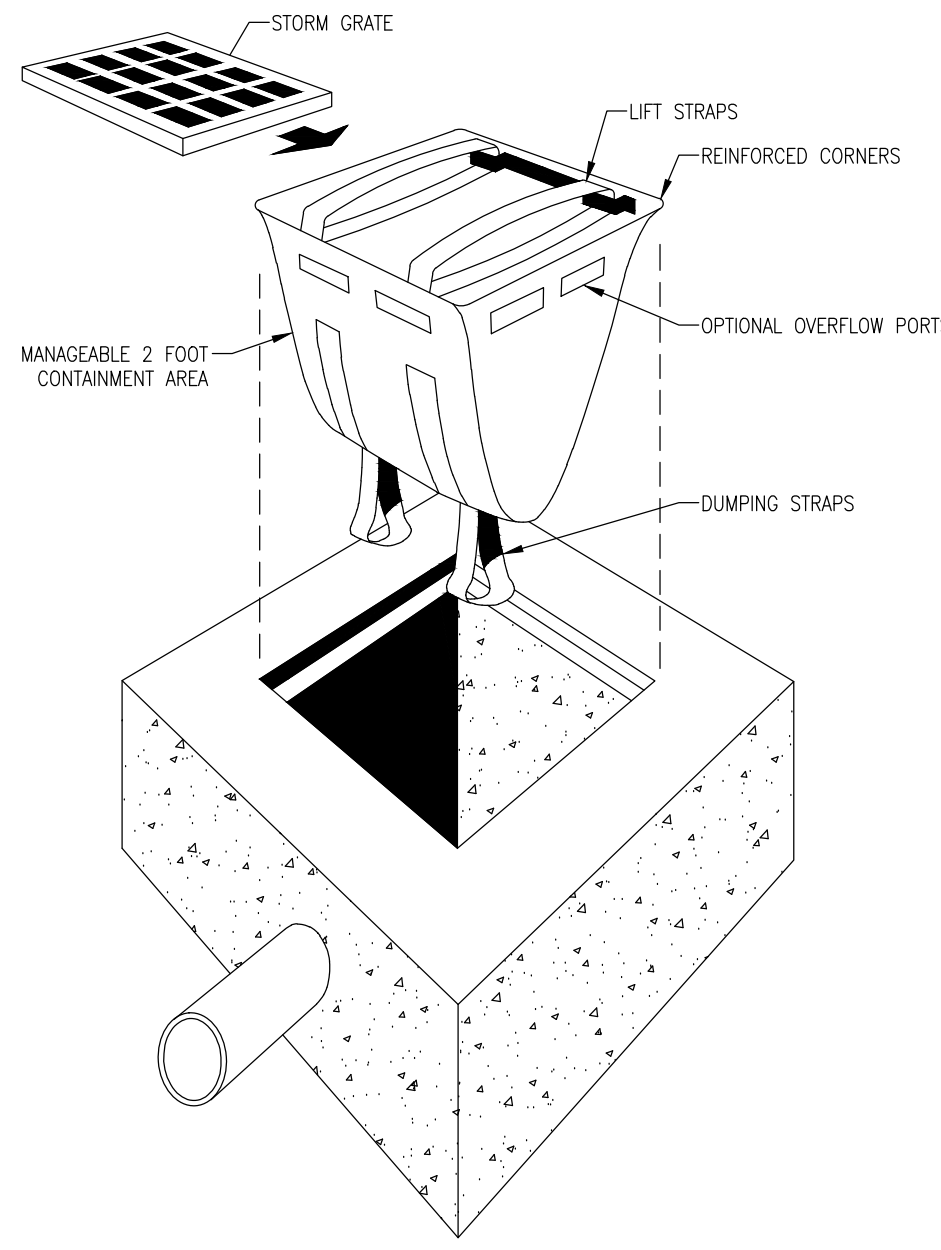
GENERAL STAPLE RECOMMENDATIONS



SLOPE GRADIENT



EROSION CONTROL MAT INSTALLATION GUIDE DETAIL  
NOT TO SCALE



DANDY SACK™ DETAIL  
NOT TO SCALE

SILT FENCE SHALL BE OF HEAVY DUTY TYPE, SECURED TO A WELDED WIRE FRAME. SILT FENCE SHALL BE PLACED IN A CIRCULAR CONFIGURATION AROUND THE INLET TO FORM A MINIMUM 5 FOOT DIAMETER ZONE OF PROTECTION.

### INSTALLATION:

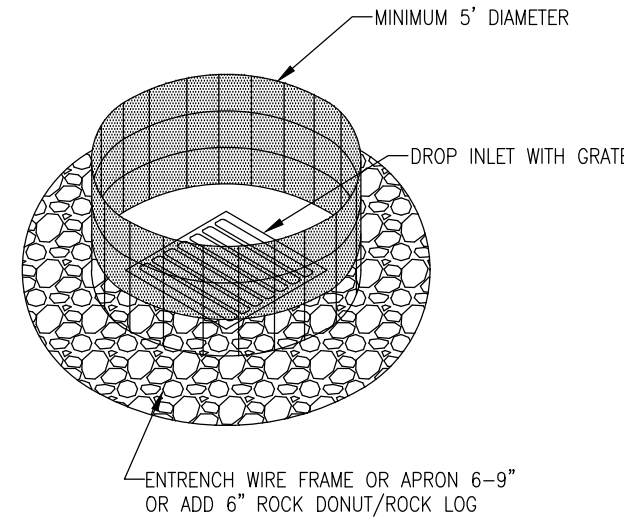
THE WIRE FRAME WILL BE SECURED IN THE CIRCULAR CONFIGURATION BY OVERLAPPING THE ENDS TO THE DESIRED SIZE AND FASTENING ONE END OF THE WELDED WIRE FRAME TO THE OVERLAPPED SECTION WITH NYLON SIP TIES OR WIRE HOG RING TYPE FASTENERS.

### BASED ON MANUFACTURE RECOMMENDATIONS AND/OR PRODUCT CONSTRUCTION:

- INLET PROTECTORS WITH AND APRON-- THE APRON OF THE SILT FENCE SHALL BE TRENCHED INTO THE SOIL (6'-9") OR A ROCK DONUT PLACED ON THE APRON. (ROCK LOGS MAY BE SUBSTITUTED FOR THE ROCK DONUT)
- INLET PROTECTORS WITHOUT AN APRON-- THE WIRE FRAME SHALL BE TRENCHED INTO THE SOIL 6'-9". IF THE FRAME CANNOT BE TRENCHED INTO THE SOIL, A ROCK DONUT SHALL BE PLACED AROUND THE BOTTOM OF THE DEVICE. (ROCK LOGS MAY BE SUBSTITUTED FOR THE ROCK DONUT) THE DEVICE SHALL BE SECURED BY EITHER ATTACHING THE WIRE FRAME TO POSTS SECURED INTO THE GROUND OR THE FRAME MAY BE WIRED DIRECTLY TO THE INLET GRATE FROM TWO OPPOSITE DIRECTIONS.

### MAINTENANCE

- INSPECT THE DROP INLET PROTECTION WEEKLY AND AFTER EACH STORM EVENT, MAKE NEEDED REPAIRS IMMEDIATELY.
- REMOVE SEDIMENT FROM THE POOL AREA TO ENSURE ADEQUATE RUNOFF STORAGE FOR THE NEXT RAIN.
- WHEN THE SURROUNDING AREA HAS BEEN STABILIZED, REMOVE THE INLET PROTECTION, AND SEDIMENT, GRADE THE DISTURBED AREA TO THE ELEVATION OF THE TOP OF THE INLET AND STABILIZE.



WELDED WIRE MONOFILAMENT  
INLET PROTECTION  
NOT TO SCALE

All fueling and servicing of vehicles on site will be conducted near the construction entrance/staging area. This area shall be contained with a row of stacked straw bales around the perimeter. Secondary containment in the form of drip pans or drop cloths shall be used to contain any spills. The contractor shall maintain a supply of oil-absorbent material to clean up any small spills that may occur. Any spillage will be removed immediately. Used absorbent material shall be removed from the site and disposed of in accordance with the laws of the State of Indiana. Contaminated soils will be placed on heavy plastic and covered or placed into approved containers to prevent contact with storm water. All fuel tanks will be in the containment areas. Oils, other vehicle fluids, paints and solvents will be stored in the construction trailer. Any spill in excess of two gallons will be reported to a representative of the contractor.

If a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period, the contractor will immediately notify the permittee who shall then do the following: notify the National Response Center (NRC) (800-424-8802) and the Indiana State Emergency Management Agency (317-232-3986); as well as the City of Franklin. Also, the engineer will prepare a revision to this document to identify measures to prevent the recurrence of such releases.

Concrete trucks shall wash out at the designated area near the construction entrance. The contractor shall take care to ensure that no waste materials are discharged into the waters of the state. Each contractor is responsible to provide litter control for trash generated by his crew. All trash including but not limited to; solid waste, paint cans, oil cans, used oil and filters will be contained and disposed of by the contractor in accordance with the laws and regulations of the State of Indiana and the City of Franklin.

## SPILL PREVENTION PLAN NOTES

- WHENEVER POSSIBLE, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND INSTALLED PRIOR TO PERFORMING OTHER EARTH DISTURBING ACTIVITIES.
- THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO BEGINNING OTHER EARTH DISTURBING ACTIVITIES IN AREAS WHERE TRAFFIC WILL BE ENTERING AND EXITING THE CONSTRUCTION SITE.
- SILT FENCES SHALL BE INSTALLED AS SHOWN ON THE PLANS PRIOR TO STARTING ANY OTHER EARTH DISTURBING ACTIVITIES.
- INLET PROTECTION FOR EXISTING STORM INLETS AND PIPES, ALONG WITH DIVERSION BERMS/SWALES AND ROCK FILTERS FOR EXISTING CONDITIONS SHALL BE PUT IN PLACE PRIOR TO ANY ADDITIONAL EARTH DISTURBING ACTIVITIES.
- AS DITCH EXCAVATION AND GRADING IS COMPLETED, EROSION CONTROL BLANKETS SHALL BE INSTALLED AS NOTED ON THE PLANS AND THE APPROPRIATE SEED MIX AS PER THE SPECIAL PROVISIONS.
- ALL ADDITIONAL DISTURBED AREAS SHALL BE SEEDDED AND/OR STABILIZED UPON COMPLETION OF THE EARTH DISTURBING ACTIVITY.
- INSTALL PIPE AND GRATE INLET PROTECTION MEASURES AND PIPE OUTLET PROTECTION AS NEW PIPES OR PIPE EXTENSIONS ARE INSTALLED. LIMIT EXCAVATION TO THE WORK THAT CAN BE PERFORMED THAT DAY. TRENCHES SHALL BE SEEDDED AND MULCHED AS PART OF THE BACKFILL OPERATION.
- WRAP ALL GRATES WITH FILTER FABRIC TO PREVENT DEBRIS AND SEDIMENT FROM ENTERING STORM SYSTEM. CHECK WEEKLY AND AFTER EACH STORM EVENT FOR DEBRIS AND SEDIMENT. CLEAR BLOCKAGES AS IDENTIFIED. TORN OR DAMAGED FABRIC SHALL BE REPLACED.
- ALL GRADED AREAS (LAWNS, BANKS, MOUNDS, ETC.) WITH SLOPES EQUAL TO OR STEEPER THAN 4H:1V SHALL BE STABILIZED WITH AN EROSION CONTROL BLANKET. ALL CONSTRUCTED SWALES CHANNELS SHALL BE STABILIZED WITH AN EROSION CONTROL BLANKET TO THE TOP OF THE BANK. SOIL STOCKPILES SHALL BE SEEDDED AND MULCHED TO MINIMIZE EROSION.
- AREAS TO BE PAVED SHALL BE STABILIZED WITH TEMPORARY SEEDING PER SPECIAL PROVISIONS. ADEQUATE SUB-BASE DEPTHS SHALL BE MAINTAINED DURING CONSTRUCTION, VERIFIED AND RESTORED, IF NECESSARY, PRIOR TO FINAL PAVING. STONE STABILIZATION SHALL BE INSTALLED PER THE PAVING SPECIFICATIONS AND DETAILS.
- MEASURES TO PROTECT EXPOSED AREAS SHALL BE INSTALLED AT THE END OF THE DAY'S WORK OR WITHIN 24 HOURS OF THE COMPLETION OF THE EARTH DISTURBING ACTIVITY, AS APPLICABLE FOR THE TYPE OF MEASURE.
- ALL DISTURBED AREAS WHERE WORK WILL POTENTIALLY CEASE FOR 15 DAYS OR LONGER SHALL BE SEEDDED AND STABILIZED IMMEDIATELY UPON COMPLETION OF THE ACTIVITY.
- EROSION AND SEDIMENT CONTROL MEASURE SHALL BE MAINTAINED UNTIL THE AREA OF THE WORK IS 95% STABILIZED.

## GENERAL EROSION AND SEDIMENT STAGING NOTES

- All erosion and sediment control practices shall be in accordance with the Indiana Handbook for Erosion Control in developing areas from the Division of Soil Conservation, Indiana Department of Natural Resources.
- The Notice of Intent (NOI) and public notice for the project shall be posted on a sign installed at or near the site construction entrance. The NOI shall list the contact information for the site contact person. The sign and information shall be maintained and remain legible throughout construction.
- A copy of the approved erosion and sediment control plan and the erosion and sediment control report shall be available at the project site throughout the entire construction period.
- There shall be no dirt, debris, or storage of materials in the street.
- The contractor shall control waste, garbage, debris, wastewater, and other substances on the site so they will not be transported from the site by the action of wind, storm water runoff, or other forces. The contractor shall be responsible for proper disposal or management of all wastes and unused building material.
- Public or private roadways shall be kept clear of accumulated sediment. All sediment that is cleared must be returned to the likely point of origin or other suitable location. Clearing of sediment shall not include flushing the area with water.
- Minimize the exposure of bare earth by limiting the work area to that necessary to perform the work.
- All erosion and sediment control measures shall be inspected, cleaned, and maintained following each storm event.
- Wherever possible, maintain existing vegetative cover. use non-vegetative material including mulch, erosion blankets, or stone to control erosion from disturbed areas.
- A log shall be maintained of all inspections (weekly, and following storm events), maintenance and repair of erosion and sediment control measures in accordance with state and local requirements. The log shall be maintained on site and be available upon request to the owners representatives and the operating authorities having jurisdiction over the site.
- The contractor shall furnish and maintain sanitary facilities for this project onsite. The facilities shall be cleaned as necessary and the waste materials shall be disposed of in accordance with the laws and regulations of the State of Indiana and local jurisdictions.
- Additional erosion control measures may be required by the field inspector.

## GENERAL EROSION AND SEDIMENT CONTROL NOTES

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Franklin, Indiana 46131

EROSION CONTROL DETAILS

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

### REVISIONS

NO.	DESCRIPTION

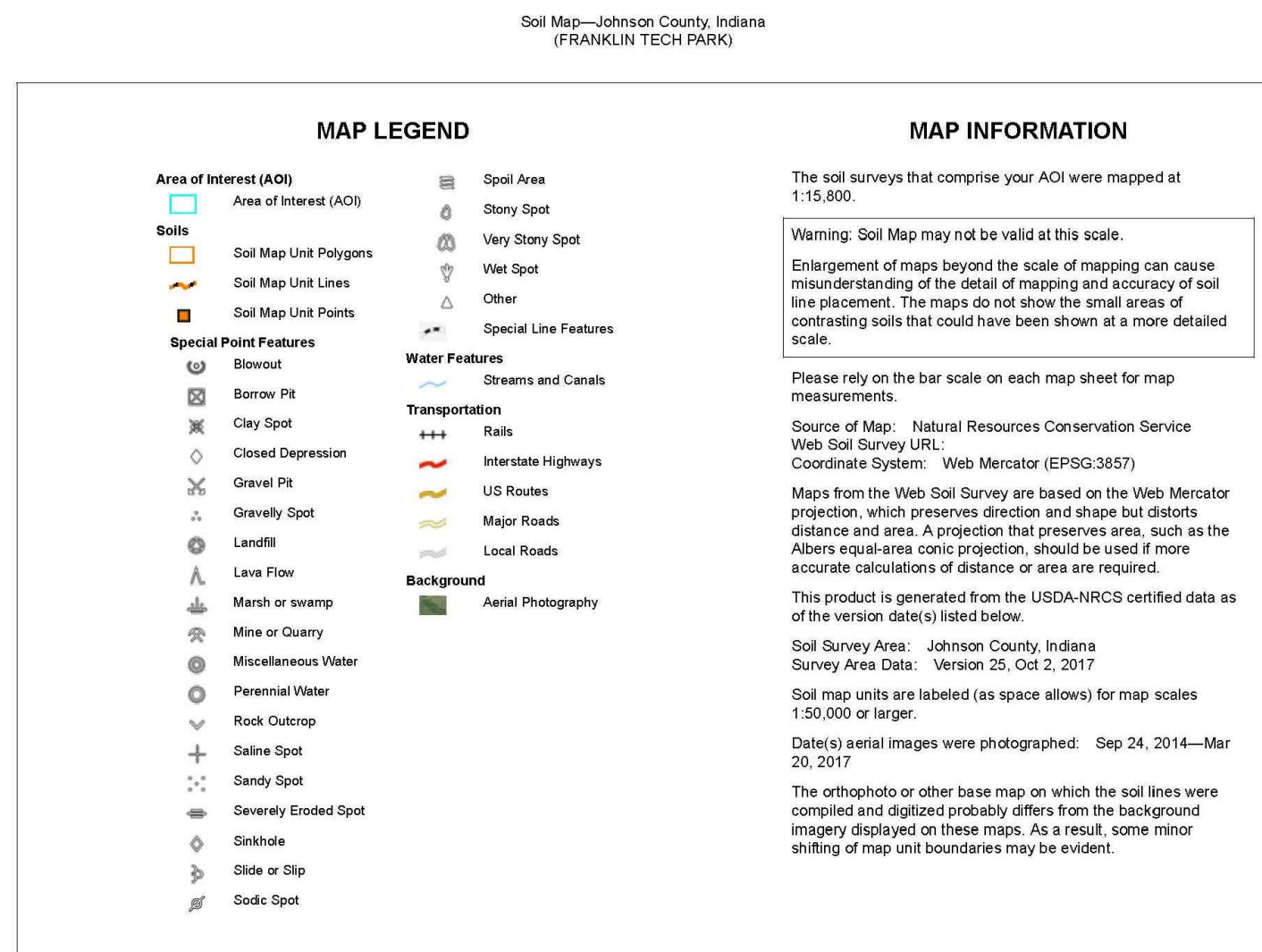
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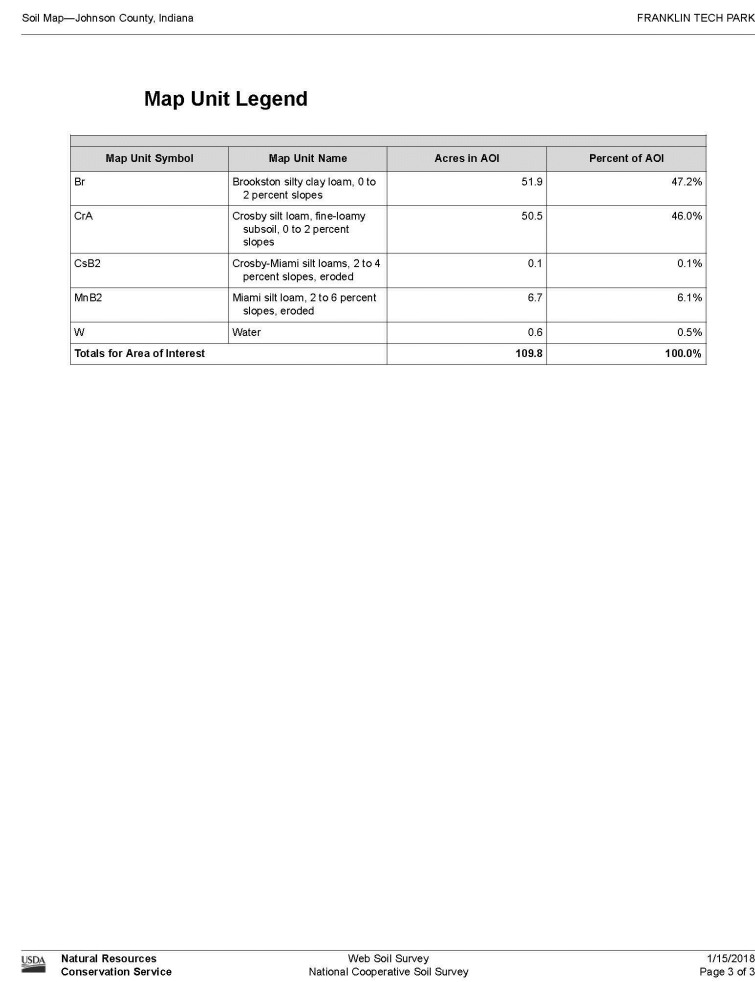




SOIL SURVEY  
NOT TO SCALE



## SOIL SURVEY LEGEND



## SOIL SURVEY LEGEND

SPECIES	SEEDING RATE		SUITABLE pH	SITE SUITABILITY *		
	LBS/ACRE	LBS/1000 SQ. FT.		DROUGHTY	WELL DRAINED	WET
LEVEL AND SLOPING, OPEN AREAS						
1. TALL FESCUE	35	.8	5.5-8.3	2	1	2
2. TALL FESCUE	25	.6	5.5-8.3		1	
3. RED CLOVER	5	.12				
4. KENTUCKY BLUEGRASS	15	.4	5.8-7.5	2	1	
5. CREEPING RED FESCUE	15	.4				
STEEP BANKS AND CUTS						
4. TALL FESCUE	15	.4	5.8-7.5	2	1	2
5. KENTUCKY BLUEGRASS	25	.6				
5. TALL FESCUE	35	.8	5.5-8.3	2	1	
6. EMERALD CROWN VETCH**	10	.25				
LAWNS AND HIGH MAINTENANCE AREAS						
6. KENTUCKY BLUEGRASS	40	.9	5.8-7.5	2	1	
7. CREEPING RED FESCUE	40	.9				
8. PERENNIAL RYEGRASS (LURF TYPE)	170	4.0	5.0-7.5		1	
7. TALL FESCUE	170	4.0	5.5-8.3	2	1	2

\* 1 - PREFERRED 2 - WILL TOLERATE \*\* INOCULATE WITH SPECIFIC INOCULANT

TEMPORARY SEEDINGS *		
TYPE OF SEED	LBS./ACRE	REMARKS
WHEAT OR RYE	150 LB.	COVER SEED 1" TO 1 1/2" DEEP
RED TOP GRASS – <i>Agrostis alba</i>	1–5 LB.	COVER SEED 1/4" DEEP
SPRING OATS – <i>Avena sativa</i>	100 LB.	COVER SEED 1" DEEP
ANNUAL RYEGRASS – <i>Lolium multiflorum</i>	40 LB.	COVER SEED 1/4" DEEP

\* NOT NECESSARY WHERE MULCH IS APPLIED.

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

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NON-IRRIGATED*												
IRRIGATED												
DORMANT SEEDING **												

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%.

SEED TOLERANCE CHART.														
	SOIL CONDITION			SHADE TOLERANCE	CLOSE MOWING TO 2-3 1/2 INCHES	TRAMPING TOLERANCE	FERTILITY NEEDS	WINTER HARDNESS	FLOODING TOLERANCE (DAYS)	MATURe HEIGHT (INCHES)	EMERGENCE TIME (DAYS)	SOIL TOLERANCE		
	WET	NORM	DRY									GEN.	SOIL	SPRAY
CREEPING RED FESCUE FESTUCA REDUA	2	1	2	1	1	1	MED.	1	20-25	12-18	7-21			S
KENTUCKY BLUEGRASS POA PRATENSIS	2	1	2	1	1	1	MED.	1	20-35	12-18	10-20			MT
TALL FESCUE FESTUCA L. ARUNDINACEA	2	1	1	1	1	1	LOW	1	24-35	24-36	5-14			T
PERENNIAL RYEGRASS LOLLUM PERENNE	2	1	2	-	1	2	MED. HIGH	2	15-20	12-18	5-10			MT
CROWNWITCH CORONILLA VARIA	-	1	1	2	-	-	LOW	1	5-10	24	14-21	T		
RED CLOVER TRIFOLIUM PROTENSE	-	1	-	2	-	-	MED.	1	7-10	18	5-10	S	S	

RANKING:  
1 GOOD  
2 MEDIUM  
- NOT TOLERANT

SALT TOLERANCE (TO BOTH SOIL SALTS & SPRAY)

T TOLERANCE  
MT MEDIUM TOLERANCE  
S SLIGHT TOLERANCE

#### SEEDBED PREPARATION

APPLY LIME TO RAISE THE pH TO THE LEVEL NEEDED FOR SPECIES BEING SEEDDED. APPLY 23 POUNDS OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST. APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.

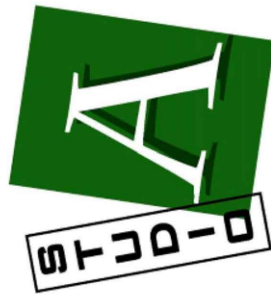
WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-3 INCHES  
WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

FEEDING

SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART). WHILE CONSIDERING BEST SEEDING DATES, IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE

## SEEDING DETAIL

**Studio A of Indianapolis**  
9511 East 96th Street  
Indianapolis, IN 46256  
(317).585.0834  
[www.studioAindy.com](http://www.studioAindy.com)



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**PROJECT PIONEER**  
180 BARTRAM PARKWAY  
Franklin, Indiana 46131

# EROSION CONTROL DETAILS

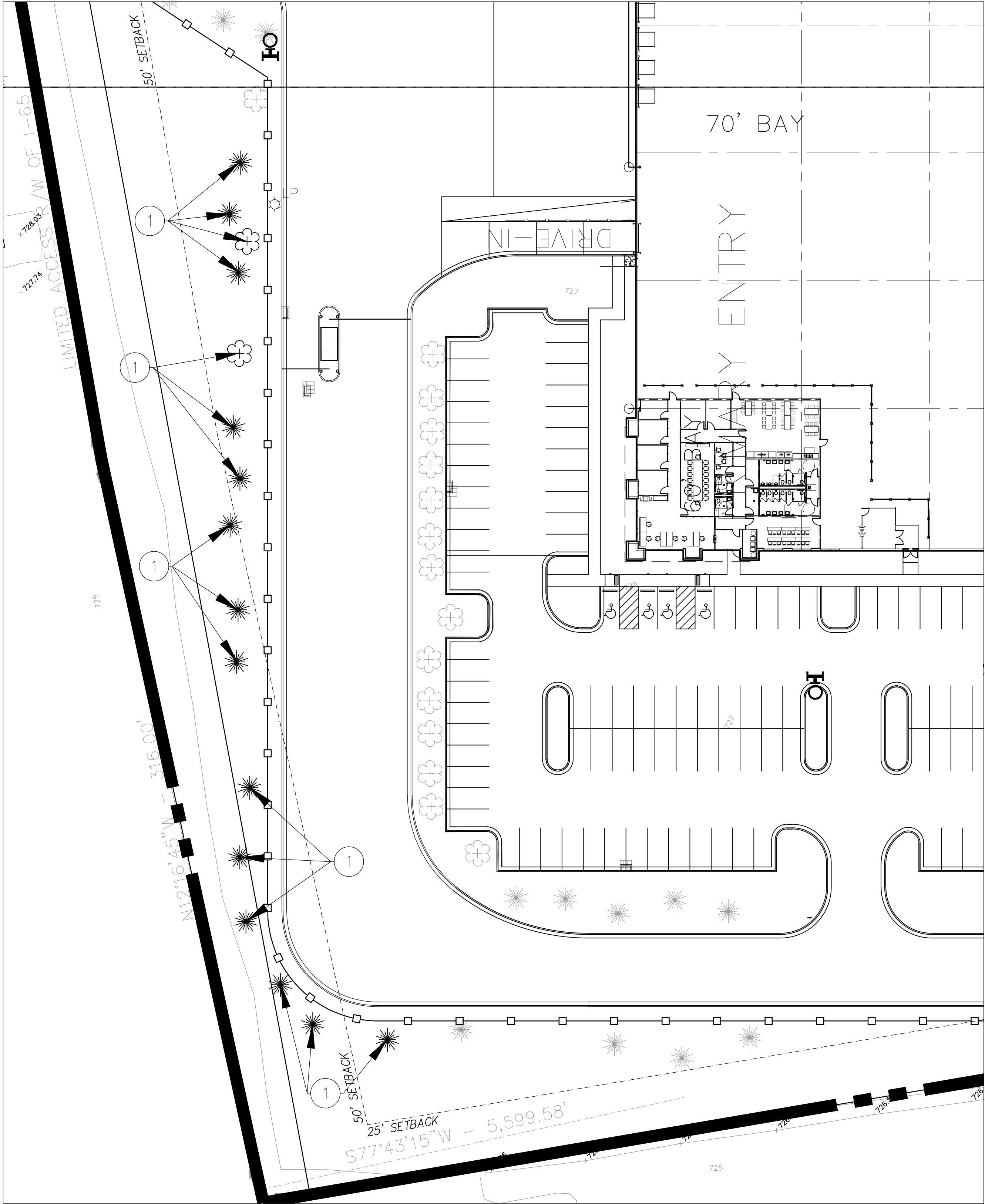
DATE:	12/5/2019
JOB NO.	170028
DRAWN BY:	AMM
CHECKED BY:	MM

## REVISIONS

SHEET NO.

# C703





SYMBOL LEGEND

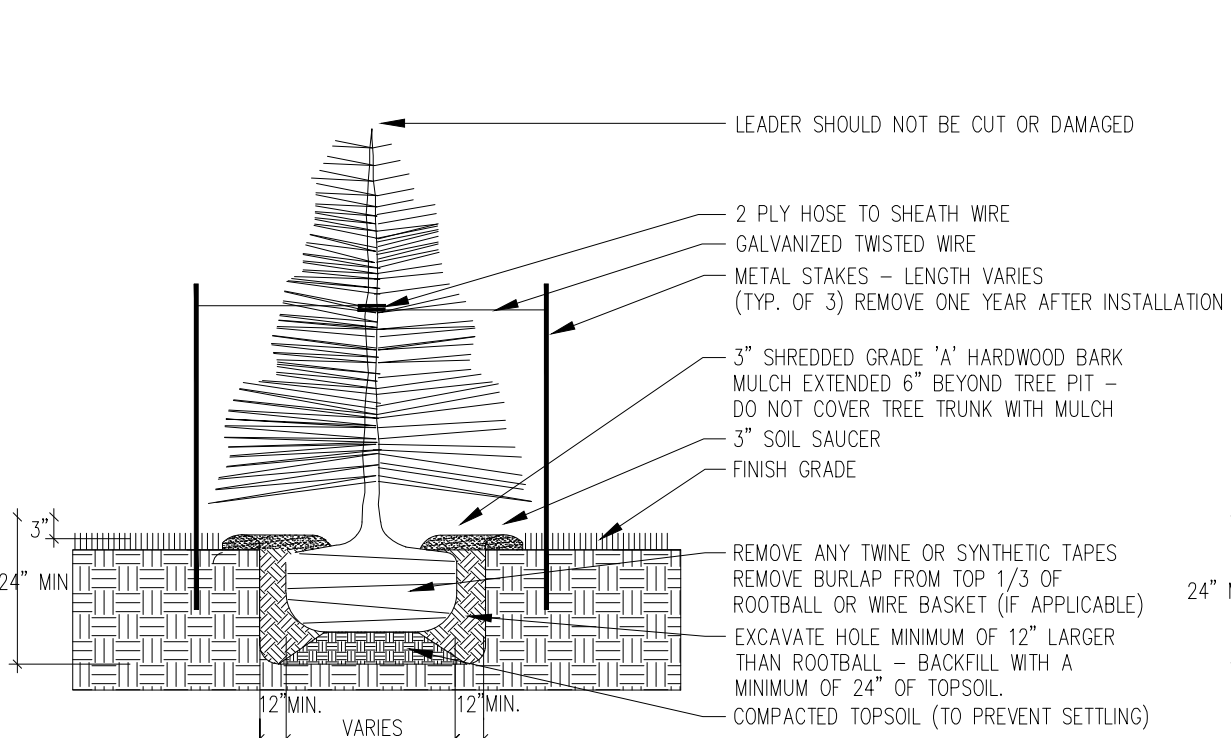
- Beehive Inlet
- Curb Inlet
- Drainage Inlet
- Drainage MH
- Electric Box
- Electric Meter Box
- Fire Hydrant
- Gas Marker
- Ground Light
- Hose Bib
- Light Pole
- Post
- Right of Way Marker
- Sanitary MH
- Sign
- Telephone Handhole
- Telephone Marker
- Telephone Pedestal
- Transformer
- Tree
- Water Marker
- Water Meter
- Water Valve
- Buried Electric Line
- Buried Gas Line
- Buried Water Line

NOTES:

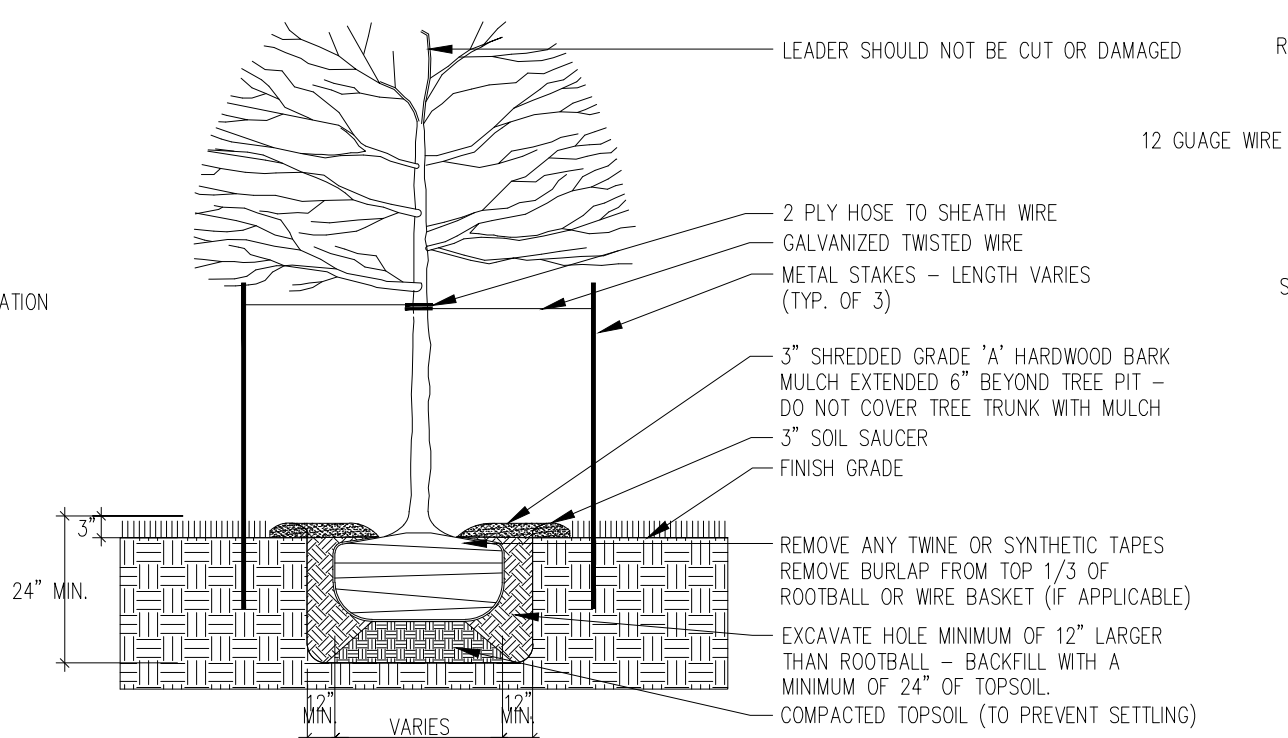
- ALL SPECIES OF PLANT MATERIALS AND SUBSTITUTIONS THEREOF ARE SUBJECT TO ACCEPTANCE BY THE LPA AND APPROVAL OF THE OWNER AND/OR PROJECT LANDSCAPE ARCHITECT. NO PLANT MATERIAL SELECTED IS ON THE LPA'S PROHIBITED TREES LIST.
- LANDSCAPE ARCHITECT AND/OR OWNER SHALL HAVE THE OPPORTUNITY TO SELECT SPECIFIC TREES FROM THE LANDSCAPE NURSERY.
- ADJUSTMENTS TO THIS LANDSCAPE PLAN MAY BE NECESSARY AS CONSTRUCTION OCCURS.
- CONTRACTOR TO REFER TO APPLICABLE ORDINANCES AND REGULATIONS FOR STANDARDS REGARDING LANDSCAPE PLANTING AND INSTALLATION.
- PLANTS SHALL NOT BE LOCATED WITHIN 10' OF UTILITY STRUCTURES, WITHIN 5' HORIZONTALLY OF UNDERGROUND UTILITY LINES AND WITHIN 15' HORIZONTALLY OF OVERHEAD UTILITY LINES UNLESS OTHERWISE SHOWN ON THE PLANS. CONSULT WITH LANDSCAPE ARCHITECT IF THESE CONDITIONS EXIST.
- IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST, THE PLAN SHALL DICTATE. IF PLANT IDENTIFICATION BOX QUANTITY SHOWN ON PLAN DIFFERS FROM GRAPHIC PLANT CIRCLE COUNT, THE GRAPHIC CIRCLE COUNT SHALL DICTATE. IF IN QUESTION, CONTACT THE LANDSCAPE ARCHITECT.
- PLANTS AND OTHER MATERIALS ARE QUANTIFIED AND SUMMARIZED FOR THE CONVENIENCE OF THE OWNER AND JURISDICTIONAL AGENCIES ONLY. CONFIRM AND INSTALL SUFFICIENT QUANTITIES TO COMPLETE THE WORK AS DRAWN AND SPECIFIED. NO ADDITIONAL PAYMENTS WILL BE MADE FOR MATERIALS REQUIRED TO COMPLETE THE WORK AS DRAWN AND SPECIFIED.
- PRIOR TO THE INSTALLATION OF LANDSCAPING, LANDSCAPE CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION MEETING WITH ALL UTILITIES, THE CONSTRUCTION MANAGER AND ANY OTHER AFFECTED PARTIES TO DISCUSS UTILITY COORDINATION.
- ALL MULCH BEDS TO BE COVERED WITH 3" THICK LAYER OF SHREDDED HARDWOOD BARK MULCH. ALL ANNUAL FLOWER BEDS SHALL BE COVERED WITH 2" SHREDDED HARDWOOD BARK MULCH. BARK MULCH SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND SHALL BE UNIFORM IN TEXTURE AND COLOR AND SHALL BE OBTAINED FROM SAWMILL OR LUMBERING OPERATIONS. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED.
- AN APPROVED PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN ALL PLANTING AND FLOWER BEDS AT RATES SPECIFIED BY MANUFACTURER FOR EACH VARIETY OF PLANT.
- FINAL PLACEMENT OF PLANT MATERIALS, ETC. SHALL BE APPROVED BY LANDSCAPE ARCHITECT. BEFORE PLANTING OPERATIONS ARE TO PROCEED. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOODEN STAKE INDICATING VARIETY AND SIZE OF TREE. ALL GROUND COVER AND MULCH BED LINES SHALL BE MARKED BY A HIGHLY VISIBLE PAINT LINE WITH OCCASIONAL WOOD STAKES FOR REFERENCE. ALL STAKES SHALL BE REMOVED FOLLOWING PLANTING OPERATIONS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANT LOCATIONS ON SITE.
- NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS ARE SHOWN TO BE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION AT NURSERY OR CONTRACTOR'S OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
- ALL PLANTS ARE TO MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, 1996 EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSEYMEN.
- PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION OPERATIONS AND AS DIRECTED BY OWNER.
- ALL LANDSCAPE PLANTINGS, INCLUDING TRANSPLANTS, SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE ARCHITECT. AT THE END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.
- THE LANDSCAPE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR HIS/HER PORTION OF WORK.
- PEAT MOSS TO BE USED ON PROJECT SHALL BE A DOMESTIC OR IMPORTED MATERIAL, CHOCOLATE BROWN IN COLOR AND COMPOSED OF PARTIALLY DECOMPOSED VEGETABLE MATERIAL. PEAT MOSS TO ALSO BE MILDLY ACIDIC IN CHARACTER AND SHALL MEET APPROVAL OF LANDSCAPE ARCHITECT.
- LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IN WRITING PRIOR TO BID DATE OF ANY PLANTS THAT HE FEELS MAY NOT SURVIVE TRANSPLANTING OPERATIONS OR IN LOCATIONS NOTED.
- ALL DISTURBED LAWN AREAS SHALL BE SEEDED OR SODDED AS DIRECTED BY OWNER. SEEDED AND SODDED LAWNS SHALL BE SEED MIX "1" FROM INDIANA STATE HIGHWAY SPECIFICATION OR AS APPROVED BY LANDSCAPE ARCHITECT.
- ALL LAWNS SHALL BE GUARANTEED TO HAVE A FULL UNIFORM STAND OF ACCEPTABLE GRASS AT END OF ONE (1) YEAR GUARANTEE PERIOD WITH NO BARE SPOTS COMPRISING MORE THAN 2% OF ANY LAWN AREA. ANY AREA SO NOTED WILL BE SEEDED UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED.
- ALL LANDSCAPE PLANTINGS TO BE MAINTAINED FOR A PERIOD UNTIL FINAL INSPECTION BY THE LANDSCAPE ARCHITECT. ALL STAKES AND GUY WIRES MUST BE REMOVED WITHIN ONE YEAR. ALL SODDED LAWN TO BE MAINTAINED FOR A PERIOD UNTIL FINAL INSPECTION BY THE LANDSCAPE CONTRACTOR. MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, MULCHING, MOWING AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF LAWNS AND PLANTINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WATERING, EVEN IF THE IRRIGATION SYSTEM IS NOT OPERATIONAL AT THE TIME OF PLANTING OR IS NOT INCLUDED IN CONSTRUCTION.
- CONTRACTOR TO SUBMIT UNIT PRICES ON EVERY TYPE OF WORK AS REQUESTED BY LANDSCAPE ARCHITECT.
- ALL LAWN AREAS WITHIN LAWN LIMIT LINES TO RECEIVE 6" MINIMUM APPROVED TOPSOIL PRIOR TO SEEDING OR SODDING OPERATIONS.
- BACKFILL FOR TREE PLANTING SHALL BE 75% APPROVED TOPSOIL AND 25% APPROVED PLANTERS MIX. TOP LAYER OF BACKFILL SHALL BE 100% EXISTING TOPSOIL A 5-10-5 ANALYSIS SLOW RELEASE FERTILIZER SHALL BE INCORPORATED INTO BACKFILL AT APPROVED RATES.
- ALL PLANTING BEDS SHALL HAVE A SPADED EDGE TO A DEPTH EQUAL TO SPECIFIED MULCH THICKNESS.

LANDSCAPE KEY NOTES:

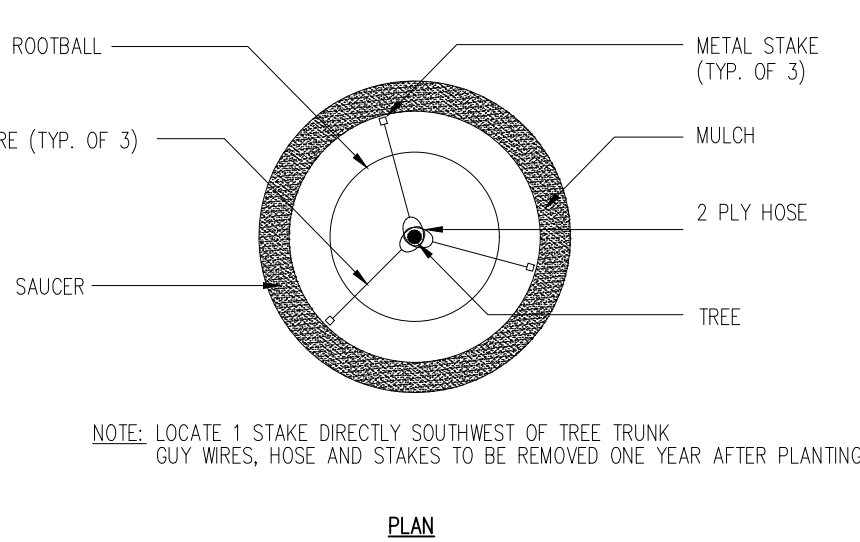
- ① RELOCATED EXISTING PLANT



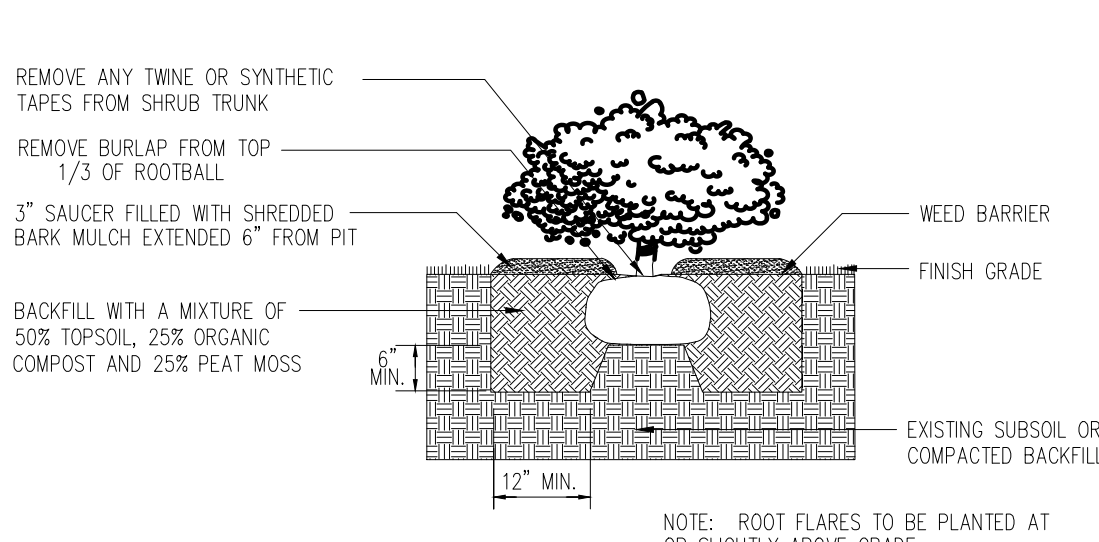
1 EVERGREEN TREE PLANTING DETAIL



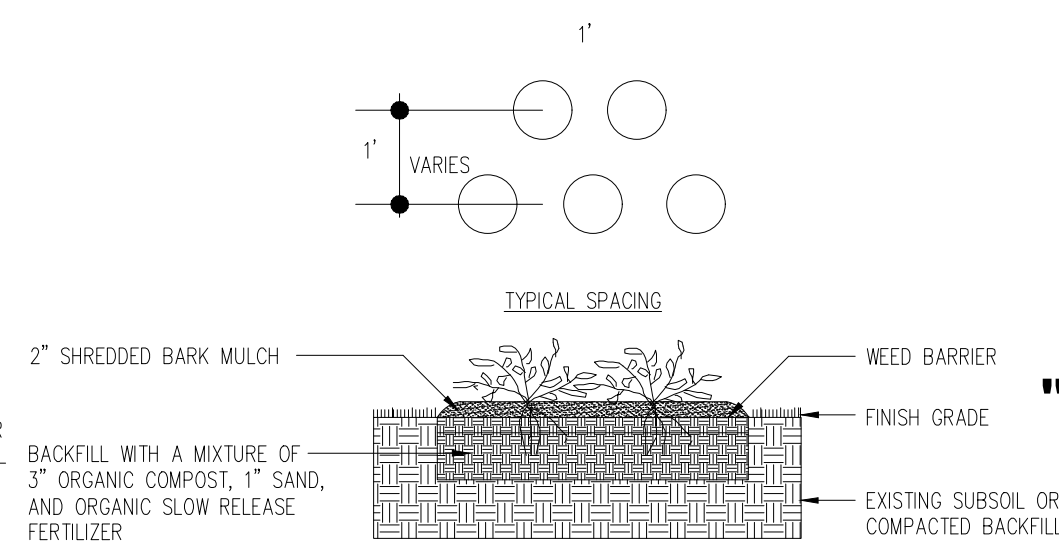
2 TREE PLANTING DETAIL



3 TREE PLANTING DETAIL



4 SHRUB PLANTING DETAIL



5 LILYTURF PLANTING DETAIL

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LANDSCAPE INFORMATION AND DETAILS

DATE: 12/5/2019  
JOB NO. 170028  
DRAWN BY: AMM  
CHECKED BY: MM

REVISIONS

SHEET NO.

L100