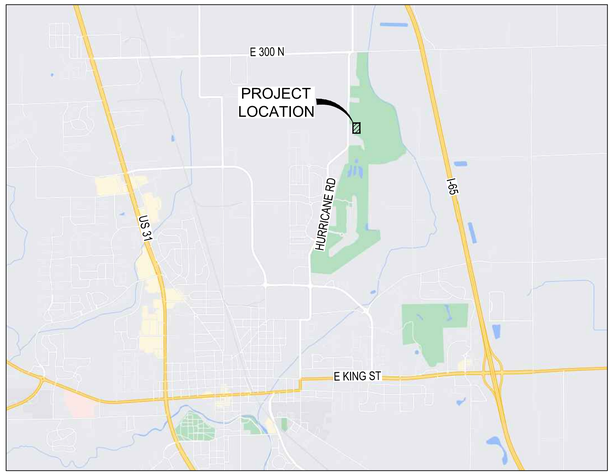
FINAL CONSTRUCTION PLANS

EAGLES LANDING
PARKING LOT ADDITION
2625 N. HURRICANE ROAD
FRANKLIN, INDIANA



VICINITY MAP
NO SCALE

LOCATION MAP
NO SCALE

PLAN INDEX	
SHEET #	SUBJECT
100	TITLE SHEET
200	TOPOGRAPHICAL SURVEY
300	SITE DIMENSION, GRADING AND EROSION CONTROL PLAN
301	STORMWATER POLLUTION PREVENTION PLAN
400	SPECIFICATIONS

OWNER/DEVELOPER
ESTATES AT FRANKLIN, LLC
176 W. JEFFERSON STREET
FRANKLIN, IN 46131
PHONE: (317) 442-0142
CONTACT: FRED PARIS
EMAIL: fredparis@fredparis.com

ENGINEER
CROSSROAD ENGINEERS, PC
115 N. 17TH AVENUE
BEECH GROVE, IN 46107
PHONE: (317) 780-1555
CONTACT: GREGORY J. ILKO
EMAIL: gilko@crossroadengineers.com

DIRECTORY PATH : R:\Active\Fred Paris\Estates At Franklin\Design\CAD\Exhibits\Parking Addition
FILENAME : 100 TITLE SHEET.dwg
DATE/USER : 4/11/2024 12:21 PM / l.cox

CROSSROAD ENGINEERS, PC
Transportation & Development Consultants
115 N. 17th Avenue, Beech Grove, IN 46107 (317) 780-1555

SHEET 100

TITLE SHEET

EAGLES LANDING

JOB No.	.	DRAWN	LMC	CHECKED	DJM
DATE	APRIL 11, 2024	DESIGNED	DJM	APPR.	GJI

GREGORY J. ILKO REGISTERED PROFESSIONAL ENGINEER 10300059 STATE OF INDIANA
PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	APPR.
1				
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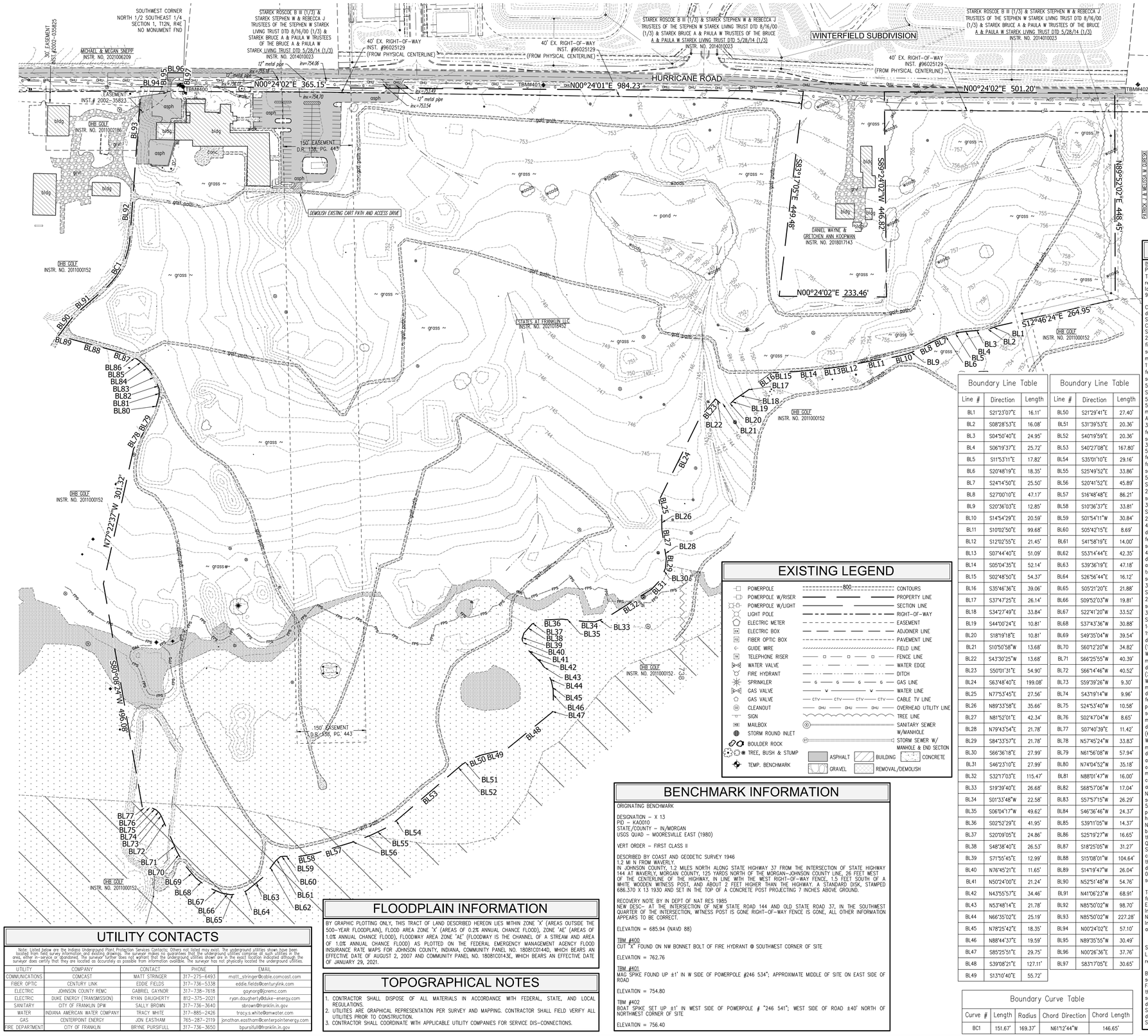

LEGAL DESCRIPTION

INSTR. NO. 2021-018452

Part of the East half of Section 1, Township 12 North, Range 4 East of the Second Principal Meridian, Needham Township, Johnson County, Indiana, and being part of the (and of L.O.I., and Indiana limited Partnership as recorded among the records of Johnson CountyIndiana in Deed Book 261, page 113 and also being a part of the land of L.O.I., Limited Partnership as recorded among the records of Johnson County, Indiana in Instrument 98014148, being more particularly described as follows:

Commencing at the Northwest Corner of the Northeast Quarter of said Section 1 and running thence South 00 degrees, 24 minutes 02 seconds West along the West line of said Northeast Quarter Section 1462.63 feet to the Southwest corner of real estate described in Deed Book 246, Page 317 recorded among the records of Johnson County, said point being the Point of Beginning; thence North 89 degrees 52 minutes 02 seconds East along the South line of said real estate, 447.00 feet to the Southeast corner thereof, thence South 12 degrees 46 minutes 24 seconds East 271.24 feet to a point on the Easterly edge of a paved cart path; thence on the following fifteen (15) courses along the Easterly edge of said paved cart path: (1) South 21 degrees 23 minutes 07 seconds East 16.11 feet; (2) South 08 degrees 28 minutes 53 seconds East 16.08 feet; (3) South 04 degrees 50 minutes 40 seconds East 24.95 feet; (4) South 06 degrees 19 minutes 37 seconds East 25.72 feet; (5) South 11 degrees 53 minutes 11 seconds East 17.82 feet; (6) South 20 degrees 48 minutes 19 seconds East 18.35 feet; (7) South 24 degrees 14 minutes 50 seconds East 25.50 feet; (8) South 27 degrees 00 minutes 10 seconds East 47.17 feet; (9) South 20 degrees 36 minutes 03 seconds East 12.85 feet; (10) South 14 degrees 54 minutes 29 seconds East 20.59 feet; (11) South 10 degrees 02 minutes 50 seconds East 99.68 feet; (12) South 12 degrees 02 minutes 55 seconds East 21.45 feet; (13) South 07 degrees 44 minutes 40 seconds East 51.09 feet; (14) South 05 degrees 04 minutes 35 seconds East 52.14 feet; (15) South 02 degrees 48 minutes 50 seconds East 54.37 feet; thence departing Easterly edge of said cart path and running South 35 degrees 46 minutes 36 seconds East 39.06 feet to a point on the Westerly edge of a field of sea grass as located on August 18, 1999; thence on the following six (6) courses along the Westerly edge of said sea grass: (1) South 37 degrees 47 minutes 25 seconds East 26.14 feet; (2) South 34 degrees 27 minutes 49 seconds East 33.84 feet; (3) South 44 degrees 00 minutes 24 seconds East 10.81 feet; (4) South 18 degrees 19 minutes 18 seconds East 10.81 feet; (5) South 10 degrees 50 minutes 58 seconds West 13.68 feet; (6) South 43 degrees 30 minutes 25 seconds West 13.68 feet; thence departing the Westerly edge of said sea grass and running South 50 degrees 01 minute 31 seconds East 54.90 feet; thence South 63 degrees 48 minutes 40 seconds East 199.08 feet to a point on the Northerly edge of a field of sea grass as located on August 18, 1999; thence on the following twenty three (23) courses along the meanderings of said sea (1) North 77 degrees 53 minutes 45 seconds East 27.56 feet; (2) North 89 degrees 33 minutes 58 seconds East 35.66 feet; (3) North 81 degrees 52 minutes 01 seconds East 42.34 feet; (4) North 79 degrees 43 minutes 54 seconds East 21.78 feet; (5) South 84 degrees 33 minutes 57 seconds East 21.78 feet; (6) South 66 degrees 36 minutes 18 seconds East 27.99 feet; (7) South 46 degrees 23 minutes 10 seconds East 27.99 feet; (8) South 32 degrees 17 minutes 03 seconds East 115.47 feet; (9) South 19 degrees 39 minutes 40 seconds East 26.68 feet; (10) South 01 degree 33 minutes 48 seconds West 22.58 feet; (11) South 06 degrees 04 minutes 17 seconds West 49.62 feet; (12) South 02 degrees 52 minutes 29 seconds East 41.95 feet; (13) South 20 degrees 09 minutes 05 seconds East 24,86 feet; (14) South 48 degrees 38 minutes 40 seconds East 26.53 feet; (15) South 71 degrees 55 minutes 45 seconds East 12.99 feet; (16) North 76 degrees 45 minutes 21 seconds East 11.65 feet; (17) North 50 degrees 24 minutes 00 seconds East 21.24 feet; (18) North 43 degrees 55 minutes 57 seconds East 34.46 feet; (19) North 53 degrees 48 minutes 14 seconds East 21.78 feet; (20) North 66 degrees 35 minutes 02 seconds East 25.19 feet; (21) North 78 degrees 25 minutes 42 seconds East 18.35 feet; (22) North 88 degrees 44 minutes 37 seconds East 19.59 feet; (23) South 85 degrees 25 minutes 51 seconds East 29.75 feet; thence departing the edge of said sea grass and running South 39 degrees 08 minutes 21 seconds East 127.11 feet to a point on the Westerly edge of a field of sea grass as located on August 18, 1999; thence on the following twenty nine (29) courses along the Westerly edge of said sea grass: (1) South 13 degrees 10 minutes 40 seconds East 55.72 feet; (2) South 21 degrees 29 minutes 41 seconds East 27.40 feet; (3) South 31 degrees 39 minutes 53 seconds East 20.36 feet; (4) South 40 degrees 19 minutes 59 seconds East 20.36 feet; (5) South 40 degrees 27 minutes 08 seconds East 167.80 feet; (6) South 35 degrees 01 minute 10 seconds East 29.16 feet; (7) South 25 degrees 49 minutes 52 seconds East 33.86 feet; (8) South 20 degrees 41 minutes 52 seconds East 45.89 feet; (9) South 16 degrees 48 minutes 48 seconds East 86.21 feet; (10) South 10 degrees 36 minutes 37 seconds East 33.81 feet; (11) South 01 degree 54 minutes 11 seconds West 30.84 feet; (12) South 05 degrees 42 minutes 15 seconds East 8.69 feet; (13) South 41 degrees 58 minutes 19 seconds East 14.00 feet; (14) South 53 degrees 14 minutes 44 seconds East 42.35 feet; (15) South 39 degrees 36 minutes 19 seconds East 47.18 feet; (16) South 26 degrees 56 minutes 44 seconds East 16.12 feet; (17) South 05 degrees 21 minutes 20 seconds East 21.88 feet; (18) South 09 degrees 52 minutes 03 seconds West 19.81 feet; (19) South 22 degrees 41 minutes 20 seconds West 33.52 feet; (20) South 37 degrees 43 minutes 36 seconds West 30.88 feet; (21) South 49 degrees 35 minutes 04 seconds West 39.54 feet; (22) South 60 degrees 12 minutes 20 seconds West 34.82 feet; South 66 degrees 25 minutes 55 seconds West 40.39 feet; (24) South 66 degrees 14 minutes 46 seconds West 40.52 feet; (25) South 59 degrees 39 minutes 26 seconds West 9.30 feet; (26) South 43 degrees 19 minutes 14 seconds West 9.96 feet; (27) South 24 degrees 53 minutes 40 seconds West 10.58 feet; (28) South 02 degrees 47 minutes 04 seconds West 8.65 feet; (29) South 07 degrees 40 minutes 39 seconds East 11.42 feet; thence departing the Westerly edge of said sea grass and running South 80 degrees 08 minutes 24 seconds West 496.08 feet; thence North 77 degrees 22 minutes 37 seconds West 301.32 feet; thence North 57 degrees 45 minutes 24 seconds West 33.83 feet to a point on the Southerly edge of a paved cart path; thence on the following ten (10) courses along the Southerly and Westerly meandering edge of said paved cart path: (1) North 61 degrees 56 minutes 08 seconds West 57.94 feet; (2) North 74 degrees 04 minutes 52 seconds West 35.18 feet; (3) North 88 degrees 01 minute 47 seconds West 16.00 feet; (4) South 68 degrees 57 minutes 06 seconds West 17.04 feet; (5) South 57 degrees 57 minutes 15 seconds West 26.29 feet; (6) South 46 degrees 36 minutes 46 seconds West 24.37 feet; (7) South 39 degrees 11 minutes 05 seconds West 14.37 feet; (8) South 25 degrees 19 minutes 27 seconds West 16.65 feet; (9) South 18 degrees 25 minutes 05 seconds West 31.27 feet; (10) South 15 degrees 08 minutes 01 second West 104.64 feet; thence departing edge of said paved cart path and running South 14 degrees 19 minutes 47 seconds West 26.04 feet to a point in the center line of a paved cart path; thence on the following four (4) courses along the center line of said paved cart path: (1) North 52 degrees 51 minutes 48 seconds West 54.76 feet; (2) North 41 degrees 06 minutes 23 seconds West 68.91 feet to a point on a non-tangent curve concave to the Southwest, having a central angle of 51 degrees 18 minutes 16 seconds and a radius of 169.37 feet; (3) Northwesterly and Westerly along said curve an arc distance of 151.66 feet (said curve being subtended by a chord having a bearing of North 61 degrees 12 minutes 44 seconds West and a length of 146.65 feet; (4) North 85 degrees 50 minutes 02 seconds West 98.70 feet; thence departing the center line of said paved cart path and running North 00 degrees 54 minutes 26 seconds East 31.64 feet; thence North 87 degrees 05 minutes 33 seconds West 181.97 feet to a point on the Easterly edge of a gravel drive, said point being on a non-tangent curve concave to the Southwest, having a central edge of angle of 29 degrees 40 minutes 41 seconds and a radius of 86.05 feet; thence Northwesterly along said gravel drive and said curve an arc distance of 44.57 feet (said curve being subtended by a chord having a bearing of North 42 degrees 14 minutes 26 seconds West and a length of 44.07 feet; thence North 89 degrees 35 minutes 58 seconds West 15.42 feet to a point on the West line of the Southeast Quarter of said section 1; thence North 00 degrees 24 minutes 02 seconds East along the West line of said Half Section 399.54 feet to the Northwest corner of real estate described in said Instrument 98014148; thence continuing North 00 degrees 24 minutes 02 seconds East along the West line of said Half Section 984.32 feet to the Center of said Section; thence South 83 degrees 17 minutes 05 seconds East 449.48 feet; thence North 00 degrees 24 minutes 02 seconds East parallel to said West line 233.46 feet; thence South 89 degrees 24 minutes 02 seconds West 446.82 feet to the West line of said Half Section; thence North 00 degrees 24 minutes 02 seconds East along said West line 507.25 feet to the Point of Beginning.

Together with non-exclusive easements for easements for access, ingress of pedestrian and golf cart traffic and for the unobstructed right to use and practice upon the golf course driving range pursuant to Declaration of Easement by and between L.O.I. Limited Partnership, an Indiana limited partnership and Indiana Golf Foundation, an Indiana charitable foundation dated September 28, 1999 and recorded October 7, 1999 as Instrument No.1999-29196, as amended by that Certain Easement Amendment by and between L.O.I. Limited Partnership an Indiana limited partnership and Indiana Golf Foundation,an Indiana charitable foundation dated September 18, 2002 and recorded October 25, 2002 as Instrument No. 2002-035824.

Part of the Southeast Quarter of the Southwest Quarter of Section 1, Township 12 North, Range 4 East of the Second Principal Meridian in Needham Township, Johnson County, Indiana, being part of land conveyed to Frances L Wright as described among the records of Johnson County Indiana in Deed Book 247, page 200 (hereinafter referred to as the Wright property),being more particularly described as follows:

Beginning at the Northeast corner of said Quarter-Quarter Section and running South 00 degrees 24 minutes 02 seconds West along the East line thereof 34.39 feet to the Southwest corner of land conveyed to Indiana Golf Foundation as described among the records of Johnson County, Indiana in instrument Number 1999-29195; thence departing said East line of said Quarter-Quarter Section and running North 89 degrees 35 minutes 55 seconds West 30.49 feet to the center line of Hurricane Road; thence North 00 degrees 26 minutes 36seconds East 37.76 feet to a point on the North line of the Southeast Quarter of the Southwest Quarter of said Section 1, said point being on the North line of said Wright property; thence South 83 degrees 17 minutes 05 seconds East along the North line of the Southeast Quarter of the Southwest Quarter of Section 1and the North line of said Wright property 30.65 feet to the Point of Beginning.

Boundary Line Table		
Line #	Direction	Length
BL1	S21°23'07"E	16.11'
BL2	S08°28'53"E	16.08'
BL3	S04°50'40"E	24.95'
BL4	S06°19'37"E	25.72'
BL5	S11°53'11"E	17.82'
BL6	S20°48'19"E	18.35'
BL7	S24°14'50"E	25.50'
BL8	S27°00'10"E	47.17'
BL9	S20°36'03"E	12.85'
BL10	S14°54'29"E	20.59'
BL11	S10°02'50"E	99.68'
BL12	S12°02'55"E	21.45'
BL13	S07°44'40"E	51.09'
BL14	S05°04'35"E	52.14'
BL15	S02°48'50"E	54.37'
BL16	S35°46'36"E	39.06'
BL17	S37°47'25"E	26.14'
BL18	S34°27'49"E	33.84'
BL19	S44°00'24"E	10.81'
BL20	S18°19'18"E	10.81'
BL21	S10°50'58"W	13.68'
BL22	S43°30'25"W	13.68'
BL23	S50°01'31"E	54.90'
BL24	S63°48'40"E	199.08'
BL25	N77°53'45"E	27.56'
BL26	N89°33'58"E	35.66'
BL27	N81°52'01"E	42.34'
BL28	N79°43'54"E	21.78'
BL29	S84°33'57"E	21.78'
BL30	S66°36'18"E	27.99'
BL31	S46°23'10"E	27.99'
BL32	S32°17'03"E	115.47'
BL33	S19°39'40"E	26.68'
BL34	S01°33'48"W	22.58'
BL35	S06°04'17"W	49.62'
BL36	S02°52'29"E	41.95'
BL37	S20°09'05"E	24.86'
BL38	S48°38'40"E	26.53'
BL39	S71°55'45"E	12.99'
BL40	N76°45'21"E	11.65'
BL41	N50°24'00"E	21.24'
BL42	N43°55'57"E	34.46'
BL43	N53°48'14"E	21.78'
BL44	N66°35'02"E	25.19'
BL45	N78°25'42"E	18.35'
BL46	N88°44'37"E	19.59'
BL47	S85°25'51"E	29.75'
BL48	S39°08'21"E	127.11'
BL49	S13°10'40"E	55.72'
BL50	S21°29'41"E	27.40'
BL51	S31°39'53"E	20.36'
BL52	S40°19'59"E	20.36'
BL53	S40°27'08"E	167.80'
BL54	S35°01'10"E	29.16'
BL55	S25°49'52"E	33.86'
BL56	S20°41'52"E	45.89'
BL57	S16°48'48"E	86.21'
BL58	S10°36'37"E	33.81'
BL59	S01°54'11"W	30.84'
BL60	S05°42'15"E	8.69'
BL61	S41°58'19"E	14.00'
BL62	S53°14'44"E	42.35'
BL63	S39°36'19"E	47.18'
BL64	S26°56'44"E	16.12'
BL65	S05°21'20"E	21.88'
BL66	S09°52'03"W	19.81'
BL67	S22°41'20"W	33.52'
BL68	S37°43'36"W	30.88'
BL69	S49°35'04"W	39.54'
BL70	S60°12'20"W	34.82'
BL71	S66°25'55"W	40.39'
BL72	S66°14'46"W	40.52'
BL73	S59°39'26"W	9.30'
BL74	S43°19'14"W	9.96'
BL75	S24°53'40"W	10.58'
BL76	S02°47'04"W	8.65'
BL77	S07°40'39"E	11.42'
BL78	N57°45'24"W	33.83'
BL79	N61°56'08"W	57.94'
BL80	N74°04'52"W	35.18'
BL81	N88°01'47"W	16.00'
BL82	S68°57'06"W	17.04'
BL83	S57°57'15"W	26.29'
BL84	S46°36'46"W	24.37'
BL85	S39°11'05"W	14.37'
BL86	S25°19'27"W	16.65'
BL87	S18°25'05"W	31.27'
BL88	S15°08'01"W	104.64'
BL89	S14°19'47"W	26.04'
BL90	N52°51'48"W	54.76'
BL91	N41°06'23"W	68.91'
BL92	N85°50'02"W	98.70'
BL93	N85°50'02"W	227.28'
BL94	N00°24'02"E	57.10'
BL95	N89°35'55"W	30.49'
BL96	N00°26'36"E	37.76'
BL97	S83°17'05"E	30.65'

Boundary Curve Table				
Curve #	Length	Radius	Chord Direction	Chord Length
BC1	151.67'	169.37'	N61°12'44"W	146.65'

EXISTING LEGEND

- POWERPOLE
- POWERPOLE W/RISER
- POWERPOLE W/LIGHT
- LIGHT POLE
- ELECTRIC METER
- ELECTRIC BOX
- FIBER OPTIC BOX
- GUIDE WIRE
- TELEPHONE RISER
- WATER VALVE
- FIRE HYDRANT
- SPRINKLER
- GAS VALVE
- GAS VALVE
- CLEANOUT
- SIGN
- MAILBOX
- STORM ROUND INLET
- BOULDER ROCK
- TREE, BUSH & STUMP
- TEMP. BENCHMARK
- 800 CONTOURS
- PROPERTY LINE
- SECTION LINE
- RIGHT-OF-WAY
- EASEMENT
- ADJOINER LINE
- PAVEMENT LINE
- FIELD LINE
- FENCE LINE
- WATER EDGE
- DITCH
- GAS LINE
- WATER LINE
- CABLE TV LINE
- OVERHEAD UTILITY LINE
- TREE LINE
- SANITARY SEWER W/MANHOLE
- STORM SEWER W/MANHOLE & END SECTION
- ASPHALT
- BUILDING
- CONCRETE
- GRAVEL
- REMOVAL/DEMOLISH

BENCHMARK INFORMATION

ORIGINATING BENCHMARK

DESIGNATION – X 13
PID – KA0010
STATE/COUNTY – IN/MORGAN
USGS QUAD – MOORESVILLE EAST (1980)

VERT ORDER – FIRST CLASS II

DESCRIBED BY COAST AND GEODETIC SURVEY 1946
1.2 MI N FROM WAVERLY.
IN JOHNSON COUNTY, 1.2 MILES NORTH ALONG STATE HIGHWAY 37 FROM THE INTERSECTION OF STATE HIGHWAY 144 AT WAVERLY, MORGAN COUNTY, 125 YARDS NORTH OF THE MORGAN–JOHNSON COUNTY LINE, 26 FEET WEST OF THE CENTERLINE OF THE HIGHWAY, IN LINE WITH THE WEST RIGHT–OF–WAY FENCE, 1.5 FEET SOUTH OF A WHITE WOODEN WITNESS POST, AND ABOUT 2 FEET HIGHER THAN THE HIGHWAY. A STANDARD DISK, STAMPED 686.370 X 13 1930 AND SET IN THE TOP OF A CONCRETE POST PROJECTING 7 INCHES ABOVE GROUND.

RECOVERY NOTE BY IN DEPT OF NAT RES 1985.
NEW DESC– AT THE INTERSECTION OF NEW STATE ROAD 144 AND OLD STATE ROAD 37, IN THE SOUTHWEST QUARTER OF THE INTERSECTION, WITNESS POST IS GONE RIGHT–OF–WAY FENCE IS GONE, ALL OTHER INFORMATION APPEARS TO BE CORRECT.

ELEVATION = 685.94 (NAVD 88)

TBM #400
CUT "X" FOUND ON NW BONNET BOLT OF FIRE HYDRANT @ SOUTHWEST CORNER OF SITE

ELEVATION = 762.76

TBM #401
MAG SPIKE FOUND UP ±1' IN W SIDE OF POWERPOLE #246 534"; APPROXIMATE MIDDLE OF SITE ON EAST SIDE OF ROAD

ELEVATION = 754.80

TBM #402
BOAT SPIKE SET UP ±1' IN WEST SIDE OF POWERPOLE # "246 541"; WEST SIDE OF ROAD ±40' NORTH OF NORTHWEST CORNER OF SITE

ELEVATION = 756.40

FLOODPLAIN INFORMATION

BY GRAPHIC PLOTTING ONLY, THIS TRACT OF LAND DESCRIBED HEREON LIES WITHIN ZONE "X" (AREAS OUTSIDE THE 500–YEAR FLOODPLAIN), FLOOD AREA ZONE 'X' (AREAS OF 0.2% ANNUAL CHANCE FLOOD), ZONE 'AE' (AREAS OF 1.0% ANNUAL CHANCE FLOOD), FLOODWAY AREA ZONE 'AE' (FLOODWAY IS THE CHANNEL OF A STREAM AND AREA OF 1.0% ANNUAL CHANCE FLOOD) AS PLOTTED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS FOR JOHNSON COUNTY, INDIANA, COMMUNITY PANEL NO. 18081C0144D, WHICH BEARS AN EFFECTIVE DATE OF AUGUST 2, 2007 AND COMMUNITY PANEL NO. 18081C0143E, WHICH BEARS AN EFFECTIVE DATE OF JANUARY 29, 2021.

TOPOGRAPHICAL NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL MATERIALS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
2. UTILITIES ARE GRAPHICAL REPRESENTATION PER SURVEY AND MAPPING. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH APPLICABLE UTILITY COMPANIES FOR SERVICE DIS–CONNECTIONS.

UTILITY CONTACTS

Note: Listed below are the Indiana Underground Plant Protection Services Contacts. Others not listed may exist. The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in–service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

UTILITY	COMPANY	CONTACT	PHONE	EMAIL
COMMUNICATIONS	COMCAST	MATT STRINGER	317–275–6493	matt_stringer@cable.comcast.com
FIBER OPTIC	CENTURY LINK	EDDIE FIELDS	317–736–5338	eddie.fields@centurylink.com
ELECTRIC	JOHNSON COUNTY REMC	GABRIEL GAYNOR	317–738–7618	gaynorg@jcremc.com
ELECTRIC	DUKE ENERGY (TRANSMISSION)	RYAN DAUGHERTY	812–375–2021	ryan.daugherty@duke–energy.com
SANITARY	CITY OF FRANKLIN DPW	SALLY BROWN	317–736–3640	sbrown@franklin.in.gov
WATER	INDIANA AMERICAN WATER COMPANY	TRACY WHITE	317–885–2426	tracy.s.white@amwater.com
GAS	CENTERPOINT ENERGY	JON EASTHAM	765–287–2119	jonathan.eastham@centerpointenergy.com
FIRE DEPARTMENT	CITY OF FRANKLIN	BRYNE PURSIFULL	317–736–3650	bpursifull@franklin.in.gov

DIRECTORY PATH : R:\Active\Fred Plans\Estates At Franklin\Design\CAD\Exhibits\Parking Addition
FILENAME : 20LTOPO.dwg
DATE/USER : 4/11/2024 12:27 PM / Lcox

CROSSROAD ENGINEERS, PC
Transportation & Development Consultants
115 N. 17th AVENUE, BEECH GROVE, IN 46107 (317) 780-1555

TOPOGRAPHICAL SURVEY

EAGLES LANDING

JOB No.	DRAWN	CHECKED	APPR.	SHEET
.	LMC	DJM	CJI	200
DATE	DESIGNED	DJM		
APRIL 11, 2024				

GREGORY J. ILKO
REGISTERED
PRELIMINARY
10300059
STATE OF INDIANA
PROFESSIONAL SURVEYOR
NOT FOR CONSTRUCTION

NO.	REVISIONS	BY	APPR.	DATE
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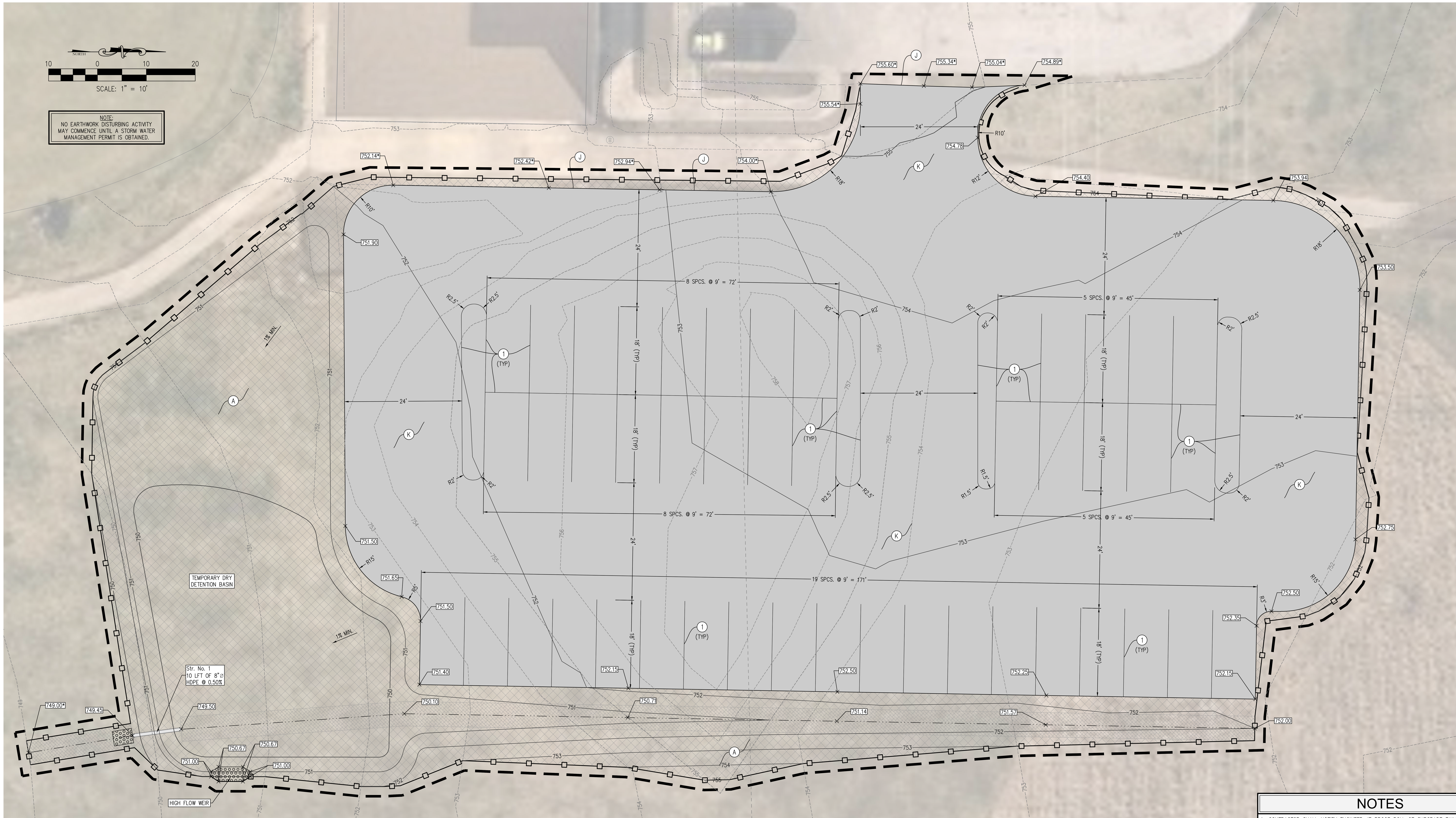
9				

SHEET 200



NORTH
10 0 10 20
SCALE: 1" = 10'
NOTE:
NO EARTHWORK DISTURBING ACTIVITY MAY COMMENCE UNTIL A STORM WATER MANAGEMENT PERMIT IS OBTAINED.
TEMPORARY DRY DETENTION BASIN
Str. No. 1
10 LFT OF 8"Ø HDPE @ 0.50%
HIGH FLOW WEIR
1% MIN.
8 SPCS. @ 9' = 72'
5 SPCS. @ 9' = 45'
19 SPCS. @ 9' = 171'
24'
18' (TYP)
(TYP)
752.14*
752.42*
752.94*
754.00*
755.54*
755.60*
755.34*
755.04*
754.89*
754.78
754.40
753.94
753.50
752.75
752.50
752.35
752.15
752.00
751.90
751.50
751.65
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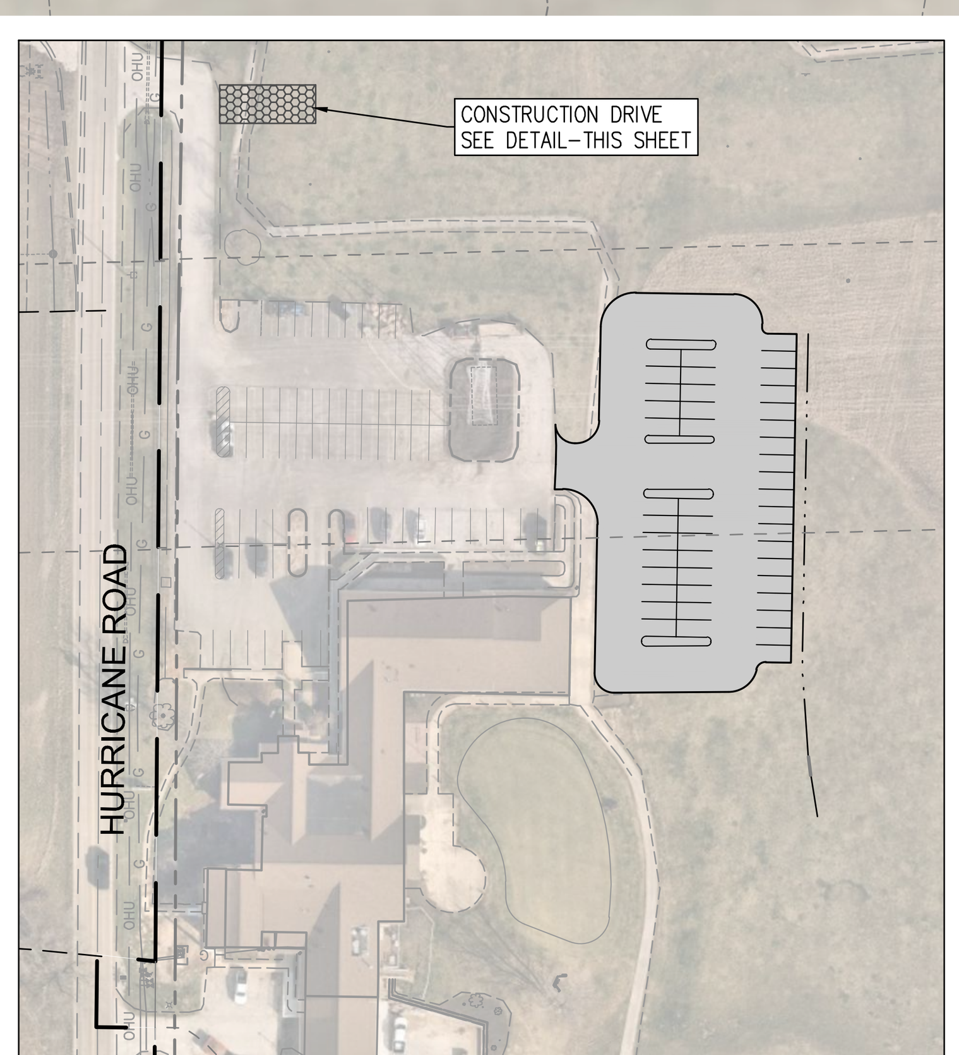
749.50
749.45
749.00*
750.67
751.00



KEYMAP
SCALE: 1" = 100'

LEGEND

×—860.00 FINISH GRADE		PROPOSED ELEVATIONS
×—860.00*		EXISTING ELEVATIONS
—·· —·· —		PROPOSED DRAINAGE SWALE
- - - - 800 - - - -		EXISTING CONTOURS
—— 800 ——		PROPOSED CONTOURS
Ⓐ	MULCH SEEDING/LANDSCAPE AREAS	
Ⓚ	TYPICAL ASPHALT SECTION 1.5" HMA SURFACE 9.5mm, ON 2.5" HMA INTERMEDIATE 19.0mm, ON 6" COMPACTED AGGREGATE #53, ON COMPACTED SUBGRADE (SEE DETAIL–THIS SHEET)	
Ⓙ	SAWCUT	
①	LINE, PAINTED, SOLID WHITE, 4"	

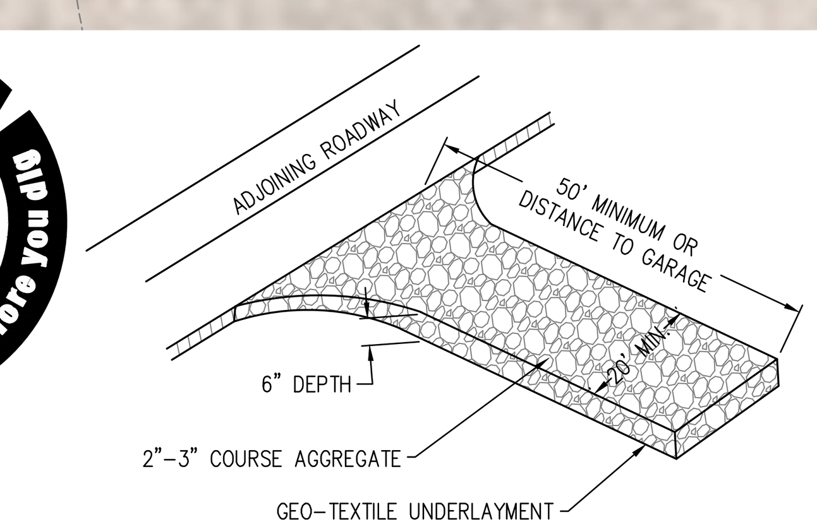
EROSION CONTROL LEGEND

▨	MULCHED SEEDING
▨	EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SC-150 OR EQUAL) AND MULCHED SEEDING
▨	REVETMENT RIPRAP
▨	CONSTRUCTION DRIVE (SEE DETAIL–THIS SHEET)
—□——□—	SILT FENCE SLOPE CHECK (NUTEC 3 NWS-6 OR APPROVED EQUAL)
— — —	CONSTRUCTION LIMITS

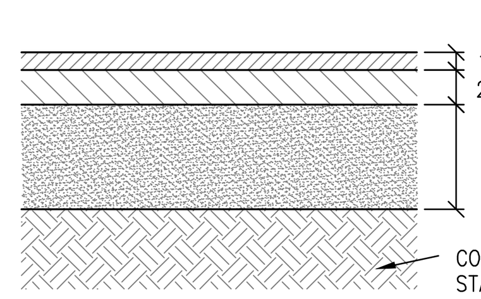
PARKING ANALYSIS

EXISTING BUILDING USES:		
DWELLING UNIT	=	9 UNITS
REQUIRED RATIO	=	2 SPCS/UNIT
BEAUTY SHOP/SPA		
TOTAL SQUARE FOOTAGE	=	3,900 SFT
REQUIRED RATIO	=	1 SPC/200 SFT
MAX. EMPLOYEE	=	6 EMPLOYEES
REQUIRED RATIO	=	1 SPC/EMPLOYEE
RESTAURANT		
NO. OF SEATS	=	150 SEATS
REQUIRED RATIO	=	1 SPC/3 SEATS
MAX. EMPLOYEE	=	12 EMPLOYEES
REQUIRED RATIO	=	1 SPC/EMPLOYEE
TOTAL REQUIRED SPACES	=	106 SPACES
EX. STANDARD PARKING SPACES	=	72 SPACES
EX. HANDICAP ACCESSIBLE SPACES	=	5 SPACES
EX. GARAGE PARKING SPACES	=	4 SPACES
PROP. STANDARD PARKING SPACES	=	45 SPACES
TOTAL PARKING SPACES	=	126 SPACES

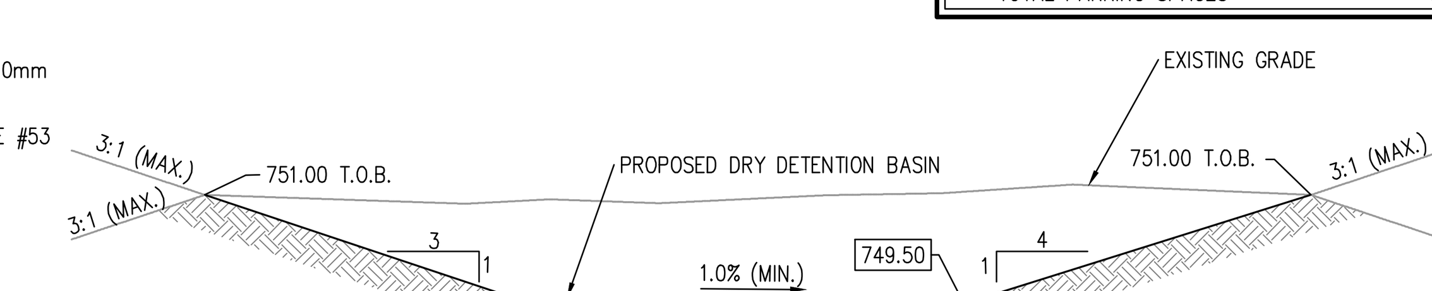
INDIANA 811 Know what's below. Call before you Dig



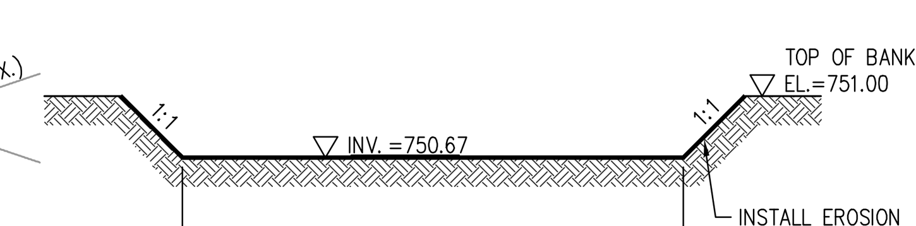
CONSTRUCTION ENTRANCE
1. INSTALL CONSTRUCTION ENTRANCE FROM STREET TO FACE OF PROPOSED BUILDING OR AT A 50' MINIMUM LENGTH. UNSE #2 STONE AT A 6" MINIMUM DEPTH.
2. A GEO–TEXTILE IS REQUIRED UNDERNEATH THE ENTRANCE TO EXTEND ITS FUNCIONALIITY.
3. FLARE OUT ENTRANCE WHERE IT MEETS THE STREET SO THAT VEHICLE TURN RADIUSES DO NOT TRAVEL OVER DISTRUBED GROUND.
4. PERIMETER CONTROLS (SILT FENCE) SHOULD BE TURNED INTO THE LOT FOR A FEW FEET WHERE THEY MEET THE CONSTRUCTION ENTRANCE.
5. INSPECT WEEKLY AND WITHIN 24 HOURS OF A ½" OF RAIN. FRESHEN OR REPLACE AS NEEDED TO PREVENT OFF SITE TRACKING. IF OFF SITE TRACKING IS OCCURING CLEAN UP IMMEDIATELY, AND CORRECT THE REASON WHY THE DRIVE IS FAILING AS SOON AS POSSIBLE. COMPLETE REPAIRS BEFORE THE NEXT ANTICIPATED RAIN AND BY NO LATER TAN ONE WEEK FROM THE DATE THEY ARE NOTED.



TYPICAL ASPHALT PAVEMENT SECTION Ⓚ
NOT TO SCALE



TYPICAL DRY BASIN SECTION
NOT TO SCALE



HIGH FLOW WEIR DETAIL
NOT TO SCALE

NOTES

1. CONTRACTOR SHALL NOTIFY ENGINEER, IF PROOF ROLL OF SUBGRADE FAILS, TO DETERMINE IF LIME STABILIZATION OF SUBGRADE IS NECESSARY.
2. ALL RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT OR PAVEMENT MARKING.
3. CONTRACTOR SHALL NOTIFY ENGINEER, IF PROOF ROLL OF SUBGRADE FAILS, TO DETERMINE IF STABILIZATION OF SUBGRADE IS NECESSARY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AND PROVIDING ALL NECESSARY FLAGMAN, BARRELS, SIGNAGE, ETC. DURING CONSTRUCTION. ALL APPLICABLE M.U.T.C.D. STANDARDS SHALL GOVERN THIS WORK.
5. ALL FIELD TILES DISTURBED DURING CONSTRUCTION MUST BE REPAIRED/CONNECTED TO NEW DRAINAGE FACILITIES.
6. MAINTAIN 18" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN AND STORM/SANITARY SEWER CROSSINGS.
7. EXISTING UTILITY SIZE AND MATERIAL INFORMATION SHOWN ON THESE PLANS ARE PER THE BEST GRAPHICAL AND VISIBLE INFORMATION AVAILABLE. CONFLICTS MAY EXIST AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL SIZING AND MATERIAL INFORMATION PROVIDED. IF ACTUAL CONDITIONS DIFFER FROM THAT INFORMATION SHOWN ON THE PLANS, THE CONTRACTOR SHALL, PRIOR TO THE INSTALLATION OF ANY PROPOSED INFRASTRUCTURE, NOTIFY THE DESIGN ENGINEER IMMEDIATELY.
8. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY STATE, COUNTY, OR LOCAL OFFICIALS.
9. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.
10. THERE SHALL BE NO DIRT, DEBRIS, OR STORAGE OF MATERIALS WITHIN EXISTING PARKING AREAS.
11. CONSTRUCTION STAGING AREA (TO BE DETERMINED BY CONTRACTOR) SHALL INCLUDE THE NOI POSTING, PORT–O–LETS, TRASH CONTAINERS, AND FUELING TANKS. CONTRACTOR SHALL NOT LOCATE STAGING AREA WITHIN PROPOSED PARKING LOT.
12. A TRAINED INDIVIDUAL MUST PERFORM AN INSPECTION ONCE A WEEK AND AFTER EVERY ½" OR MORE RAIN EVENT. A LOG OF THE INSPECTION REPORTS MUST BE KEPT AND MADE AVAILABLE TO THE TOWN INSPECTOR UPON REQUEST.
13. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES AS NECESSARY.
14. ALL STORM WATER CASTINGS SHALL BE PHASE II COMPLIANT.
15. ALL PORT–O–LETS MUST BE ANCHORED DOWN TO PREVENT SPILLS.
16. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL.
17. THE CITY ENGINEER HAS THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IN THE FIELD AS CONDITIONS WARRANT.
18. ALL STORMWATER POLLUTION PREVENTION CONTROL MUST BE FUNCTIONAL AND MAINTAINED THROUGHOUT CONSTRUCTION.
19. CORRECTIONS MUST BE MADE WEEKLY AND BEFORE ANY ANTICIPATED RAIN.
20. ANY AREAS WHERE SEDIMENT IS ACTIVELY LEAVING THE SITE MUST BE REMEDIED IMMEDIATELY.
21. TOTAL DISTURBED ACREAGE FOR THIS PROJECT IS APPROXIMATELY 0.712 ACRES.

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CROSSROAD ENGINEERS, PC
Transportation & Development Consultants
115 N. 17th AVENUE, BEECH GROVE, IN 46107 (317) 780-1555

SHEET 300

SITE DIMENSION, GRADING AND EROSION CONTROL PLAN

EAGLES LANDING

JOB No.	.	DRAWN	LMC	CHECKED	DJM
DATE	APRIL 11, 2024	DESIGNED	DJM	APPR.	GJI

GREGORY J. ILKO REGISTERED No. 10300059 STATE OF INDIANA PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION
[illegible]

NO.	DATE	REVISIONS	BY	APPR.
9				
8				
7				
6				
5				
4				
3				
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SHEET 300

EROSION CONTROL PLAN INDEX

PLAN ELEMENTS

A1

RULE 5 EROSION CONTROL PLAN INDEX

ELEMENT	SHEET	ELEMENT	SHEET	ELEMENT	SHEET	ELEMENT	SHEET
A4	301	A19	300	B4	300 & 301	B12	300 & 301
A5	301	A21	300	B5	300 & 301	B13	301
A6	300	A22	300	B6	300 & 301	B14	301
A15	300	A23	300	B7	300 & 301		
A16	300	B2	301	B10	300 & 301		
A18	300	B3	301	B11	300 & 301		

A2 11 BY 17 INCH PLAT
The 11x17 inch Plat has been submitted to the respective Soils and Water Conservation District.

A3 PROJECT NARRATIVE
The project involves the construction of a 45 space parking lot. The project is located at the east side of the existing building located at 2625 N. Hurricane Road in the City of Franklin. There are no storm sewer systems being utilized for this project, all runoff shall be conveyed via sheet flow. Drainage will discharge into a proposed temporary dry detention basin located at the south end of the proposed parking lot. Construction is anticipated to begin in the Summer of 2024.

A4 VICINITY MAP
The Vicinity Map is located in the right half of the Erosion Control Details.
Latitude N 39°30'56" Longitude W 86°02'03"

A5 LEGAL DESCRIPTION
The Legal Description of the project site is located in the lower right quadrant of the Erosion Control Details.

A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS
All pertinent lot information is included on the plan view of the Erosion Control Plan. Anticipated utilities, and structures are depicted as well.

A7 HYDROLOGIC UNIT CODE
The Hydrologic Unit Code for the represented watershed of this project is: 05120204090050

A8 STATE AND/OR FEDERAL WATER QUALITY PERMITS
No State of Federal water quality permits are required for this project.

A9 STORMWATER DISCHARGE
Stormwater discharge shall leave the proposed detention facility via an 8"ø pipe and will then follow existing drainage patterns.

A10 WETLANDS, LAKES AND WATER COURSES.
There are no potential wetland areas located within the project site, nor shall any potential wetland areas be disturbed as a result of construction.

A11 RECEIVING WATERS
The ultimate receiving water for this project is Hurricane Creek.

A12 POTENTIAL DISCHARGES TO GROUND WATER
There are no potential locations where stormwater may enter the groundwater.

A13 100 YEAR FLOOD PLAINS, FLOODWAYS AND FLOODWAY FRINGES
By graphic plotting only, this tract of land described hereon lies within Zone 'X' (areas outside the 500-year floodplain), flood area Zone 'X' (areas of 0.2% annual chance flood), Zone 'AE' (areas of 1.0% annual chance flood), floodway area Zone 'AE' (floodway is the channel of a stream and area of 1.0% annual chance flood) as plotted on the Federal Emergency Management Agency Flood Insurance Rate Maps for Johnson County, Indiana, Community Panel No. 18081C0144D, which bears an effective date of August 2, 2007 and Community Panel No. 18081C0143E, which bears an effective date of January 29, 2021.

A14 POST-CONSTRUCTION PEAK DISCHARGE
Qpre Max. (10 year) = 3.25 cfs
Qpost Max. (10 year) = 4.59 cfs (inflow to temporary dry detention basin)
Qpost Max. (10 year) = 1.49 cfs (outflow from temporary dry detention basin)

A15 ADJACENT LANDUSE
The adjacent landuses are all associated with the existing golf course.

A16 DISTURBED AREAS
The construction limits (boundary of disturbed area) are shown on the Erosion Control Plan.

A17 EXISTING VEGETATIVE COVER
The existing site, within the area of the parking lot expansion, is grass covered with small areas of asphalt for golf cart paths and an access drive.

A18 SOILS MAP AND DESCRIPTIONS
The soils map and all pertinent soil type information are located on the upper right quadrant of the Erosion Control Details.

A19 PROPOSED STORMWATER SYSTEMS
The proposed stormwater system sizes and dimensions are labeled on the Erosion Control Plan.

A20 OFF-SITE CONSTRUCTION ACTIVITIES
No offsite activities will take place within this project.

A21 SOIL STOCKPILES, BORROW/DISPOSAL AREAS
Topsoil shall be stockpiled in a convenient location (as determined by the owner and/or contractor) within the construction site as shown on the Erosion Control Plan.

A22 EXISTING SITE TOPOGRAPHY
Existing one-foot contours are shown on the Erosion Control Plan.

A23 PROPOSED SITE TOPOGRAPHY
Proposed one-foot contours are shown on the Erosion Control Plan.

STORMWATER POLLUTION PREVENTION - DURING CONSTRUCTION

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
There is a potential for pollutants associated with construction machinery including diesel fuel, hydraulic fluid, engine oils and lubricants, antifreeze and other petroleum products. It is unavoidable for a small amount of these pollutants to contaminate soil in the grading and construction of the site. Sediment pollution from site disturbing activities shall be remedied by Erosion Control measures (see following sections).

B2 SEQUENCE OF STORMWATER QUALITY MEASURE IMPLEMENTATION
The Construction Sequence & Schedule of Erosion Control Measure Implementation is located in the upper half on the Erosion Control Details.

B3 CONSTRUCTION ENTRANCE
The construction entrance shall be installed off of the north parking lot entrance, from Hurricane Road, to the existing building. Specifications and details are located on the Erosion Control Details.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS
Sediment Control measures for Sheet flow areas are shown on the Erosion Control Plan. Specifications and details are located on the Erosion Control Details.

B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS
Sediment Control measures for concentrated flow areas are shown on the Erosion Control Plan. Specifications and details are located on the Erosion Control Details.

B6 STORM SEWER INLET PROTECTION MEASURES
There are no proposed storm sewer inlets for this project.

B7 RUNOFF CONTROL MEASURES
Runoff control measures are shown on the Erosion Control Plan. Specifications and details are located on the Erosion Control Details.

B8 STORMWATER OUTLET PROTECTION MEASURES
Stormwater outlet protection measures are shown on the Erosion Control Plan. Specifications and details are located on the Erosion Control Details.

B9 GRADE STABILIZATION STRUCTURES
No grade stabilization structures are required for this project.

B10 LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH STORMWATER QUALITY MEASURE
Each stormwater quality measure is shown on the Erosion Control Plan and associated details/specifications are shown on the Erosion Control Details.

B11 TEMPORARY SURFACE STABILIZATION
Temporary surface stabilization methods are shown on the Erosion Control Plan and detailed on the Erosion Control Details.

B12 PERMANENT SURFACE STABILIZATION
Permanent surface stabilization methods are shown on the Erosion Control Plan and detailed on the Erosion Control Details.

B13 MATERIAL HANDLING AND SPILL PREVENTION
Spill prevention shall be accomplished by utilizing spillguards for equipment fueling and servicing operations. Spillguards shall be 3'x3'x6" and shall be constructed of a material resistant petroleum products (including diesel fuel and oil). On-site fuel storage tanks shall have emergency storage capacity directly below the tank in case of rupture. Any hazardous material spillage shall be collected and/or cleaned immediately by a trained individual and disposed of in accordance with all federal, state and local regulations.
Indiana Department of Environmental Management
Office of Emergency Response (317) 233-7745, Toll Free (800) 233-7745
Franklin Fire Department (888) 736-3650
Additional Material Handling and Spill Prevention (this sheet)

B14 MONITORING AND MAINTENANCE GUIDELINES
Monitoring and Maintenance Guidelines are located in the middle on the Erosion Control Details.

B15 EROSION & SEDIMENT CONTROL MEASURES FOR INDIVIDUAL BUILDING LOTS
Not applicable, as this is to be developed as as a parking lot expansion.

STORMWATER POLLUTION PREVENTION - POST CONSTRUCTION

C1 PROPOSED POLLUTANTS AND SOURCES ASSOCIATED WITH PROPOSED LAND USE
Potential pollutants include petroleum products and antifreeze from automobiles using the parking areas, fertilizers, pesticides, and herbicides for lawn maintenance and sediment from various sources.

C2 STORMWATER QUALITY MEASURE IMPLEMENTATION
Stormwater quality measures are implemented by construction of the site improvements.

C3 PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES
Post construction stormwater quality measures shall consist of establishing vegetation within the temporary dry detention basin and expansive areas of grass that will capture sediment through sheet flow conveyance.

C4 LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH STORMWATER QUALITY MEASURE
The location of the water quality measures can be found on Sheet 300.

C5 MAINTENANCE GUIDELINES OF POST CONSTRUCTION STORMWATER QUALITY MEASURES
All landscape areas shall be maintained by mowing, removing trash and debris, and re-planting any vegetated areas as necessary. The proposed outlet pipe within the temporary dry detention basin shall be inspected for blockage of any type after each storm event. All obstructions, trash and debris shall be removed upon inspection.

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MONITORING AND MAINTENANCE GUIDELINES

GRAVEL CONSTRUCTION DRIVE AND PARKING AREA:

A. Inspect weekly and after each storm event and log condition per IDEM.

TOPSOIL:

A. Inspect weekly until vegetation is established and log condition per IDEM.

TEMPORARY AND PERMANENT SEEDING:

A. Inspect periodically, especially after storm events, until the stand is successfully established.
B. Plan to add fertilizer the following growing season according to soil test recommendations.
C. Repair damaged, bare, or sparse areas by filling any gullies, re-fertilizing, over- or re-seeding, and mulching.
D. If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; repair the affected area either by over-seeding or by re-seeding and mulching after re-preparing the seed bed.
E. If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems.
F. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.
G. Reference the latest INDOT Specification.

MULCHING:

A. Inspect after storm events to check for movement of mulch or for erosion.
B. If washout, breakage, or erosion is present, repair the surface, then re-seed, re-mulch, and , if applicable, install new netting.
C. Continue inspections until vegetation is firmly established.
D. Reference the latest INDOT Specification.

EROSION CONTROL BLANKET:

A. During vegetative establishment, inspect after storm events for any erosion below the blanket.
B. If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
C. After vegetative establishment, check the treated area periodically.

SILT FENCE:

A. Inspect the silt fence periodically and after each storm event.
B. If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
C. Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
D. Take care to avoid undermining the fence during clean out.
E. After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade and stabilize.

RIPRAP:

A. Inspect periodically for displaced rock material, slumping, and erosion at edges,

CONSTRUCTION SEQUENCE & SCHEDULE OF EROSION CONTROL IMPLEMENTATION

1. Silt fence shall be placed as shown in these plans before any land disturbing activities are started.
2. Schedule a pre-construction meeting with the City of Franklin 48 hours prior to start of earthwork.
3. Construct temporary gravel entrance in accordance with the "INDIANA STORM WATER QUALITY MANUAL". All other erosion control measures shall be installed and constructed as shown at the beginning of the project.
4. Strip topsoil and stockpile, as necessary, in approved location.
5. Rough grade site. Disturbed areas should be seeded immediately following rough grading. Areas that will not be disturbed again should be permanently seeded. No unvegetated areas should be exposed for more than seven days.
6. Final grade site. All erosion control blankets shall be installed per manufacturers recommendations as soon as final grading is complete.
7. Final paving operations. Temporary erosion control measures shall remain in place until vegetation is secure.

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

1. All Erosion Control practices shall be in accordance with the latest edition of the INDIANA STORM WATER QUALITY MANUAL.
2. The Erosion Control measures included in this plan shall be installed prior to initial land disturbance activities or as soon as practical. Sediment shall be prevented from discharging from the project site by installing and maintaining silt fence, straw bales, sediment basins, etc. As shown on this plan. If shown on this plan, energy-dissipation devices or Erosion Control at the outfall of the storm sewer system shall be installed at the time of the construction of the outfall.
3. All on-site storm drain inlets shall be protected against sedimentation with silt sack inlet filters, filter fabric, or equivalent barriers as shown on this plan.
4. 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, sodding, mulching, covering, or by other equivalent Erosion Control measures.
5. This 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 person 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 in such a way that they shall not be transported from the site by the action of winds, storm water runoff, or other forces. Proper disposal or management of all wastes and unused building materials appropriate to the nature of the waste or material is required.
9. Additional Erosion Control measures may be required by state or county agencies.

ADDITIONAL MATERIAL HANDLING AND SPILL PREVENTION PLAN

A. PURPOSE

The purpose of this plan is two fold:
1. To help protect the health and safety of those working on the site as well as the environment.
2. Preventing the contamination of storm water runoff. Pollutants generated onsite may include gasoline, diesel fuel, oils, grease, paints, pesticides, nutrients, concrete washout, soil, solvents, paper, plastic, Styrofoam, metals, glass and other forms of liquid or solid wastes.

This plan outlines procedures to help prevent health and safety issues, contamination of storm water by onsite pollutants, help prevent fuel and chemical spills and provide a response procedure should a spill occur.

B. PREVENTION AND READINESS

1. The contractor or responsible party will prepare a contact list in the event of a spill on the site. The contact list will have names and contact numbers. The contact list will specify first responders and a chain of command. Include information on what circumstances require the initiation of the contact list and chain of command.
2. The contractor/owner shall maintain a list of qualified contractors, Vac-trucks, tank pumpers and other equipment or businesses qualified to do clean-up operations. Absorbent materials and supplies need to be available onsite in sufficient quantities to address minor spills. All employees need to be educated on the proper application of the absorbent materials.
3. All maintenance and equipment operators must be aware and trained for prevention of spills. A continuing education program is required for new employees and emphasizing the importance to all employees.
4. All materials used in the course of a cleanup will be disposed in a manor approved by Indiana Department of Environmental Management.
5. Using water to flush spilled material will not be permitted unless authorized by a state, federal, or local agency. Tarps can be used to cover spilled material during rain events.

C. SPILL RESPONSE

Minor - Small spills that typically involve oil gasoline, paint, hydraulic fluid etc. Minor spills can be controlled by the first responder at the discovery of the spill.
- Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
- Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly.

Semi-significant Spills - Approximately ten gallons or less of pollutant with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:
- Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
- Use absorbent material to clean-up spills and dispose of properly. Spills on impervious surfaces should be contained with a dry absorbent. Spills on clayey soils should be contained by constructing an earthen dike and should be disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.
- Contact 911 if this spill could be a safety issue.
- Contact supervisors and designated inspectors immediately
- Contaminated solids to be removed to an approved landfill.

Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals or has the potential for surface or groundwater pollution.
- Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system.
- Immediately contact the local Fire Department at 911 to report any hazard material spill.
- Contact supervisors and designated inspectors immediately. Other county or municipal officials (list as needed) responsible for storm water facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible.
- As soon as possible but within 2 hours of discovery, contact the Department of Environmental Management,
  Office of Emergency Response 1-888-233-7745. The following information should be noted for future reports to IDEM or the National Response Center.
  - Name, address and phone number of person making the spill report
  - The location of the spill
  - The time of the spill
  - Identification of the spilled substance
  - Approximate quantity of the substance that has been spilled or may be further spilled
  - The duration and source of the spill
  - Name and location of the damaged waters
  - Name of spill response organization
  - What measures were taken in the spill response
  - Other information that may be significant

Additional regulation or requirements may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is given by Emergency Response.

D. THE FOLLOWING PROCEDURES AND PRACTICES WILL HELP PREVENT UNNECESSARY SPILLS

I. Vehicle and Equipment Fueling

Description and Purpose:
- Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Limitations:
- Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling.

Implementation:
- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage "topping-off" of fuel tanks.
- Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.
- Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- Dedicated fueling areas should be protected from stormwater run-on and runoff, and should be located at least 50 feet away from the downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.
- Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Inspection and Maintenance
- Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.
- Keep ample supplies of spill cleanup materials onsite.
- Immediately clean up spills and properly dispose of contaminated soils.

II. Solid Waste Management

Description of Purpose:
- Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Suitable Applications:
This BMP is suitable for construction sites where the following wastes are generated or stored:
- Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction.
- Packaging materials including wood, paper, and plastic.
- Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces, and masonry products.
- Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes,
- Construction waste including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, non-hazardous equipment parts. Styrofoam and other materials send transport and package construction materials.

Implementation:
The following steps will help keep a clean site and reduce stormwater pollution:
- Select designated waste collection areas onsite.
- Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use.
- Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
- Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions.
- Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acid, pesticides, additives, curing compounds) are not disposed of in dumpsters designed for construction debris.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow.
- Clean up immediately if a container does spill.
- Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas. Solid waste storage areas should be located in areas prone to flooding or ponding.
- Locate solid waste dumpster a minimum of 50' away from storm water inlets or other drainage facilities.
- Locate dumpster on stone or earth to minimize the potential for spills or leaks to drain immediately into a drainage facility.

Inspection and Maintenance:
- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Inspect construction waste are regularly.
- Arrange for regular waste collection.

III. Concrete Washout

The following steps will help reduce stormwater pollution from concrete wastes:
- Discuss the concrete management techniques described in the BMP (such as handling of concrete waste and washout) with the reddy-mix concrete supplier before any deliveries are made.
- Incorporate requirements for concrete waste management into material supplier and subcontractors' agreements.
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks offsite or in designed areas only.
- Do not wash concrete trucks into storm drains open ditches, streets, or streams.
- Do no allow excess concrete to be dumped onsite, except in designed areas.

For onsite washout:
- Locate washout areas at least 50 feet from storm drains, open ditches, or water bodies.
- Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.
- Avoid creating runoff by drinking water to a bermed or level area when washing concrete to remove fine particles and expose the aggregate.
- Do not wash sweepings form exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.

IV. Vehicle Maintenance Areas

Purpose- To prevent spills during the normal maintenance of construction machinery.

Implementation- Where and when feasible, maintenance shall be preformed offsite in covered facility with an impervious floor.
- Use a dedicated site for machinery maintenance
- Site the maintenance area at least 50 feet from storm water inlets or water bodies
- Maintain clean up materials close at hand. Utilize drip pans and absorbent pads to prevent oils from reaching the soil surface.
- Inspect equipment daily for leaks or worn hoses. Repair or replace to prevent onsite spills
- Properly dispose of all fluids removed or spilled from machinery.

V. Fluids, paints, solvents and other chemicals storage and use

Purpose- To prevent spills during the use and storage of the materials

Implementation-
- Store materials in there original containers
- Maintain safety data sheets on all products
- Store materials in a weather proof/vandal resistant locker or building
- Keep materials away from flammable sources
- Provide and read instructions for the proper use and storage of all materials
- For bulk material stored onsite, provide diking or double containment in case of leaks or failures.
- No washout of solvent from paint supplies should be done near or into a storm water inlet or other drainage facility.

VI. Disposal of sediment laden water

Purpose- To prevent the purposeful discharge of sediment laden water into waters of the United States.

Implementation-
- The sediment and any other pollutant from all pumping or dewatering operations that discharge into storm sewers, wetlands, drainage ways or water bodies must be removed from the water before it's discharged.
- A suitable practice is needed at the discharge to allow the suspended solids to be removed from the water column. Slow moving water and time are needed components for an effective practice. Mechanical filters and chemical flocculants can do an excellent job of removing the fine materials.
- Sediment removal pumping bags may be used at the outlet of a pump. The bags must be sized appropriately for the amount of flow. The practice needs to be installed on erosion resistant surfaces. The outlet of the pumping bag must be erosion resistant to prevent additional sedimentation.
- Pumping operations that are moving clean water through a site are not required to have a pumping bag or similar device at the outlet. The point of discharge should be protected to prevent soil erosion.

	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)	SALT TOLERANCE		
	WET	NORM	DRY									GEN.	SOIL	SPRAY
CREEPING RED FESCUE FESTUCA RUBRA	2	1	2	1	1	1	MED.	1	20-25	12-18	7-21			S
KENTUCKY BLUEGRASS POA PROTINSIS	2	1	2	1	1	1	MED.	1	25-35	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 LOLIUM PERENNE	2	1	2	-	1	2	MED-HIGH	2	15-20	12-18	5-10		MT	
CROWNVETCH CORANILLA VARIA	-	1	1	2	-	-	LOW	1	5-10	24	14-21	T		
RED CLOVER TRIFOLIUM PRATENSE	-	1	-	2	-	-	MED.	1	7-10	18	5-10	S	S	

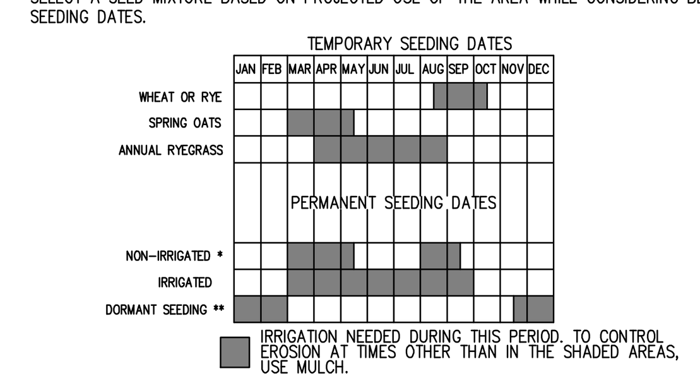
RANKING
1 GOOD
2 MEDIUM
- NOT TOLERANT

SALT TOLERANCE (TO BOTH SOIL SALTS AND SPRAY)
T - TOLERANCE
MT - MEDIUM TOLERANCE
S - SLIGHT TOLERANCE

SEEDBED PREPARATION
APPLY LIME TO RAISE THE pH TO THE LEVEL NEEDED FOR SPECIES BEING SEEDED. APPLY 23 LBS. OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1,000 SQ. FT. (APPROXIMATELY 1,000 LBS. 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 A DEPTH OF 2 TO 3 INCHES WITH A HARROW, DISK, OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE. FERTILIZER AND LIME SHALL MEET REQUIREMENTS OF INDOT STANDARD SPECIFICATIONS 1995.

SEEDING
SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA WHILE CONSIDERING BEST SEEDING DATES.

TEMPORARY SEEDING DATES



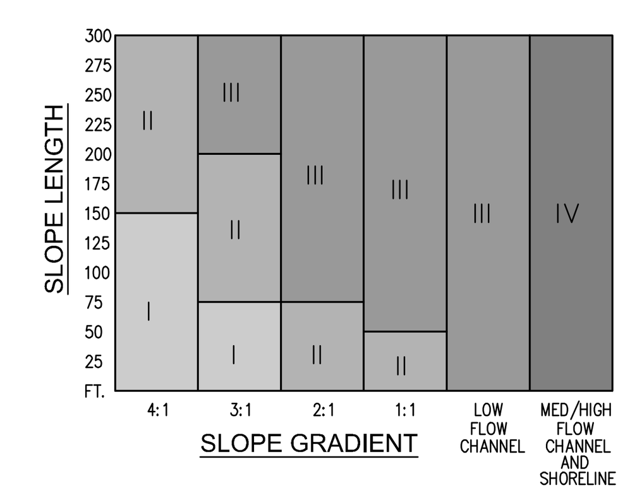
* -LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.

** -INCREASE SEEDING APPLICATION BY 50%.

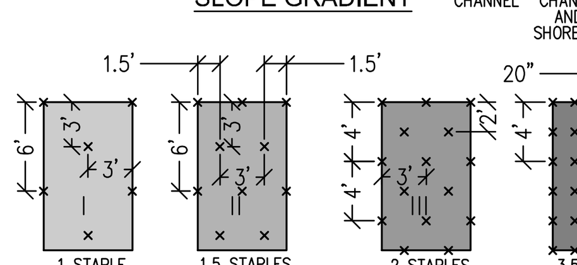
TEMPORARY SEEDINGS

KIND OF SEED	PER 1,000 SQ. FT.	PER 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 1" DEEP
ANNUAL RYEGRASS	1.0 LBS.	40 LBS.	COVER SEED 1/4" DEEP *

* NOT NECESSARY WHERE MULCH IS APPLIED.



SLOPE GRADIENT



EROSION CONTROL BLANKET
STAPLE PATTERN DETAIL

PERMANENT SEED MIXTURES

SPECIES	SEEDING RATE LBS/ACRE	SUITABLE pH	SITE SUITABILITY DROUGHTY	DRAINED	WET
LEVEL AND SLOPING, OPEN AREAS					
TALL FESCUE	35	5.5 - 8.3	2	1	2
TALL FESCUE RED CLOVER **	25 5	5.5 - 8.3		1	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	15 15	5.5 - 7.5	2	1	
STEEP BANKS AND CUTS					
TALL FESCUE KENTUCKY BLUEGRASS	15 25	5.8 - 7.5	2	1	2
TALL FESCUE EMERALD CROWNVETCH **	35 10	5.5 - 8.3	2	1	
LAWNS AND HIGH MAINTENANCE AREAS					
KENTUCKY BLUEGRASS CREEPING RED FESCUE	40 40	5.8 - 7.5	2	1	
PERENNIAL RYEGRASS (TURF TYPE)	170	5.0 - 7.5		1	
TALL FESCUE	170	5.5 - 8.3	2	1	2

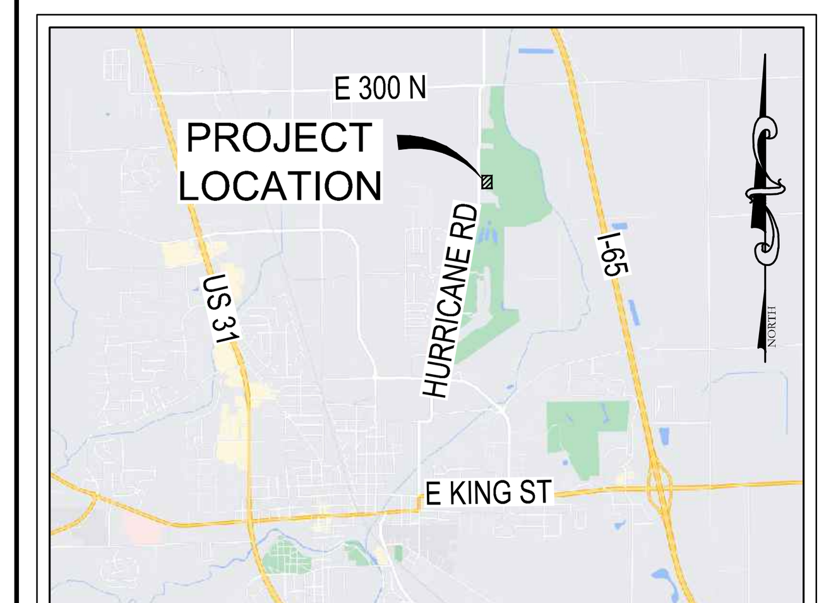
1-PREFERRED 2-WILL TOLERATE ** - INOCULATE WITH SPECIFIC INOCULATES

Johnson County, Indiana (IN081)

CROSBY SILT LOAM (CrA)
This nearly level soil is on broad plains, on ridge tops in rolling areas, or in low drainageways. Slopes are 0 to 2 percent. Runoff is slow. Wetness is the main limitation.Soil has limitations for building sites and must be artificially drained and protected from flooding.

MIAMI SILT LOAM (MmB2)
This gently sloping soil is along drainageways that cross areas of somewhat poorly drained Crosby soils. Slopes are 2 to 6 percent. Runoff is medium. Moderate erosion is the main limitation.

SOIL MAP AND DESCRIPTION
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

LEGAL DESCRIPTION

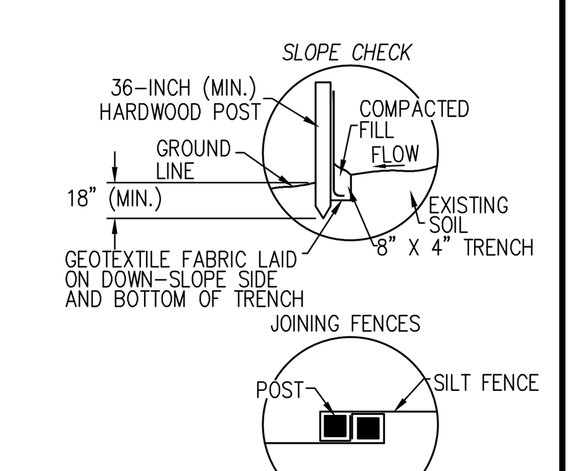
INSTR. NO. 2021-018452
Part of the East half of Section 1, Township 12 North, Range 4 East of the Second Principal Meridian, Needham Township, Johnson County, Indiana, and being part of the (and of L.O.I., and Indiana limited Partnership as recorded among the records of Johnson County,Indiana in Deed Book 261, page 113 and also being a part of the land of L.O.I., Limited Partnership as recorded among the records of Johnson County, Indiana in Instrument 98014148, being more particularly described as follows:

Commencing at the Northwest Corner of the Northeast Quarter of said Section 1 and running thence South 00 degrees, 24 minutes 02 seconds West along the West line of said Northeast Quarter Section 1462.63 feet to the Southwest corner of real estate described in Deed Book 246, Page 317 recorded among the records of Johnson County, said point being the Point of Beginning; thence North 89 degrees 52 minutes 02 seconds East along the South line of said real estate, 447.00 feet to the Southeast corner thereof, thence South 12 degrees 46 minutes 24 seconds East 271.24 feet to a point on the Easterly edge of a paved cart path; thence on the following fifteen (15) courses along the Easterly edge of said paved cart path: (1) South 21 degrees 23 minutes 07 seconds East 16.11 feet; (2) South 08 degrees 28 minutes 53 seconds East 16.08 feet; (3) South 04 degrees 50 minutes 40 seconds East 24.95 feet; (4) South 06 degrees 19 minutes 37 seconds East 25.72 feet; (5) South 11 degrees 53 minutes 11 seconds East 17.82 feet; (6) South 20 degrees 48 minutes 19 seconds East 18.35 feet; (7) South 24 degrees 14 minutes 50 seconds East 25,50 feet; (8) South 27 degrees 00 minutes 10 seconds East 47.17 feet; (9) South 20 degrees 36 minutes 03 seconds East 12.85 feet; (10) South 14 degrees 54 minutes 29 seconds East 20.59 feet; (11) South 10 degrees 02 minutes 50 seconds East 99.68 feet; (12) South 12 degrees 02 minutes 55 seconds East 21.45 feet; (13) South 07 degrees 44 minutes 40 seconds East 51.09 feet; (14) South 05 degrees 04 minutes 35 seconds East 52.14 feet; (15) South 02 degrees 48 minutes 50 seconds East 54.37 feet; thence departing Easterly edge of said cart path and running South 35 degrees 46 minutes 36 seconds East 39.06 feet to a point on the Westerly edge of a field of sea grass as located on August 18, 1999; thence on the following six (6) courses along the Westerly edge of said sea grass: (1) South 37 degrees 47 minutes 25 seconds East 26.14 feet; (2) South 34 degrees 27 minutes 49 seconds East 33.84 feet; (3) South 44 degrees 00 minutes 24 seconds East 10.81 feet; (4) South 18 degrees 19 minutes 18 seconds East 10.81 feet; (5) South 10 degrees 50 minutes 58 seconds West 13.68 feet; (6) South 43 degrees 30 minutes 25 seconds West 13.68 feet; thence departing the Westerly edge of said sea grass and running South 50 degrees 01 minute 31 seconds East 54.90 feet; thence South 63 degrees 48 minutes 40 seconds East 199.08 feet to a point on the Northerly edge of a field of sea grass as located on August 18, 1999; thence on the following twenty three (23) courses along the meanderings of said sea (1) North 77 degrees 53 minutes 45 seconds East 27,56 feet; (2) North 89 degrees 33 minutes 58 seconds East 35.66 feet; (3) North 81 degrees 52 minutes 01 seconds East 42.34 feet; (4) North 79 degrees 43 minutes 54 seconds East 21.78 feet; (5) South 84 degrees 33 minutes 57 seconds East 21.78 feet; (6) South 66 degrees 36 minutes 18 seconds East 27.99 feet; (7) South 46 degrees 23 minutes 10 seconds East 27.99 feet; (8) South 32 degrees 17 minutes 03 seconds East 115.47 feet; (9) South 19 degrees 39 minutes 40 seconds East 26.68 feet; (10) South 01 degree 33 minutes 48 seconds West 22.58 feet; (11) South 06 degrees 04 minutes 17 seconds West 49.62 feet; (12) South 02 degrees 52 minutes 29 seconds East 41.95 feet; (13) South 20 degrees 09 minutes 05 seconds East 24,86 feet; (14) South 48 degrees 38 minutes 40 seconds East 26.53 feet; (15) South 71 degrees 55 minutes 45 seconds East 12.99 feet; (16) North 76 degrees 45 minutes 21 seconds East 11.65 feet; (17) North 50 degrees 24 minutes 00 seconds East 21.24 feet; (18) North 43 degrees 55 minutes 57 seconds East 34.46 feet; (19) North 53 degrees 48 minutes 14 seconds East 21.78 feet; (20) North 66 degrees 35 minutes 02 seconds East 25.19 feet; (21) North 78 degrees 25 minutes 42 seconds East 18.35 feet; (22) North 88 degrees 44 minutes 37 seconds East 19.59 feet; (23) South 85 degrees 25 minutes 51 seconds East 29.75 feet; thence departing the edge of said sea grass and running South 39 degrees 08 minutes 21 seconds East 127.11 feet to a point on the Westerly edge of a field of sea grass as located on August 18, 1999; thence on the following twenty nine (29) courses along the Westerly edge of said sea grass: (1) South 13 degrees 10 minutes 40 seconds East 55.72 feet; (2) South 21 degrees 29 minutes 41 seconds East 27.40 feet; (3) South 31 degrees 39 minutes 53 seconds East 20.36 feet; (4) South 40 degrees 19 minutes 59 seconds East 20.36 feet; (5) South 40 degrees 27 minutes 08 seconds East 167.80 feet; (6) South 35 degrees 01 minute 10 seconds East 29.16 feet; (7) South 25 degrees 49 minutes 52 seconds East 33.86 feet; (8) South 20 degrees 41 minutes 52 seconds East 45.89 feet; (9) South 16 degrees 48 minutes 48 seconds East 86.21 feet; (10) South 10 degrees 36 minutes 37 seconds East 33.81 feet; (11) South 01 degree 54 minutes 11 seconds West 30.84 feet; (12) South 05 degrees 42 minutes 15 seconds East 8.69 feet; (13) South 41 degrees 58 minutes 19 seconds East 14.00 feet; (14) South 53 degrees 14 minutes 44 seconds East 42.35 feet; (15) South 39 degrees 36 minutes 19 seconds East 47.18 feet; (16) South 26 degrees 56 minutes 44 seconds East 16.12 feet; (17) South 05 degrees 21 minutes 20 seconds East 21.88 feet; (18) South 09 degrees 52 minutes 03 seconds West 19.81 feet; (19) South 22 degrees 41 minutes 20 seconds West 33.52 feet; (20) South 37 degrees 43 minutes 36 seconds West 30.88 feet; (21) South 49 degrees 35 minutes 04 seconds West 39.54 feet; (22) South 60 degrees 12 minutes 20 seconds West 34.82 feet; South 66 degrees 25 minutes 55 econds West 40.39 feet; (24) South 66 degrees 14 minutes 46 seconds West 40.52 feet; (25) South 59 degrees 39 minutes 26 seconds West 9.30 feet; (26) South 43 degrees 19 minutes 14 seconds West 9.96 feet; (27) South 24 degrees 53 minutes 40 seconds West 10.58 feet; (28) South 02 degrees 47 minutes 04 seconds West 8.65 feet; (29) South 07 degrees 40 minutes 39 seconds East 11.42 feet; thence departing the Westerly edge of said sea grass and running South 80 degrees 08 minutes 24 seconds West 496.08 feet; thence North 77 degrees 22 minutes 37 seconds West 301.32 feet; thence North 57 degrees 45 minutes 24 seconds West 33.83 feet to a point on the Southerly edge of a paved cart path; thence on the following ten (10) courses along the Southerly and Westerly meandering edge of said paved cart path: (1) North 61 degrees 56 minutes 08 seconds West 57.94 feet; (2) North 74 degrees 04 minutes 52 seconds West 35.18 feet; (3) North 88 degrees 01 minute 47 seconds West 16.00 feet; (4) South 68 degrees 57 minutes 06 seconds West 17.04 feet; (5) South 57 degrees 57 minutes 15 seconds West 26.29 feet; (6) South 46 degrees 36 minutes 46 seconds West 24.37 feet; (7) South 39 degrees 11 minutes 05 seconds West 14.37 feet; (8) South 25 degrees 19 minutes 27 seconds West 16.65 feet; (9) South 18 degrees 25 minutes 05 seconds West 31.27 feet; (10) South 15 degrees 08 minutes 01 second West 104.64 feet; thence departing edge of said paved cart path and running South 14 degrees 19 minutes 47 seconds West 26.04 feet to a point in the center line of a paved cart path; thence on the following four (4) courses along the center line of said paved cart path: (1) North 52 degrees 51 minutes 48 seconds West 54.76 feet; (2) North 41 degrees 06 minutes 23 seconds West 68.91 feet to a point on a non-tangent curve concave to the Southwest, having a central angle of 51 degrees 18 minutes 16 seconds and a radius of 169.37 feet; (3) Northwesterly and Westerly along said curve an arc distance of 151.66 feet (said curve being subtended by a chord having a bearing of North 61 degrees 12 minutes 44 seconds West and a length of 146.65 feet; (4) North 85 degrees 50 minutes 02 seconds West 98.70 feet; thence departing the center line of said paved cart path and running North 00 degrees 54 minutes 26 seconds East 31.64 feet; thence North 87 degrees 05 minutes 33 seconds West 181.97 feet to a point on the Easterly edge of a gravel drive, said point being on a non-tangent curve concave to the Southwest, having a central edge of angle of 29 degrees 40 minutes 41 seconds and a radius of 86.05 feet; thence Northwesterly along said gravel drive and said curve an arc distance of 44.57 feet (said curve being subtended by a chord having a bearing of North 42 degrees 14 minutes 26 seconds West and a length of 44.07 feet; thence North 89 degrees 35 minutes 58 seconds West 15.42 feet to a point on the West line of the Southeast Quarter of said section 1; thence North 00 degrees 24 minutes 02 seconds East along the West line of said Half Section 399.54 feet to the Northwest comer of real estate described in said Instrument 98014148; thence continuing North 00 degrees 24 minutes 02 seconds East along the West line of said Half Section 984.32 feet to the Center of said Section; thence South 83 degrees 17 minutes 05 seconds East 449.48 feet; thence North 00 degrees 24 minutes 02 seconds East parallel to said West line 233.46 feet; thence South 89 degrees 24 minutes 02 seconds West 446.82 feet to the West line of said Half Section; thence North 00 degrees 24 minutes 02 seconds East along said West line 507.25 feet to the Point of Beginning.

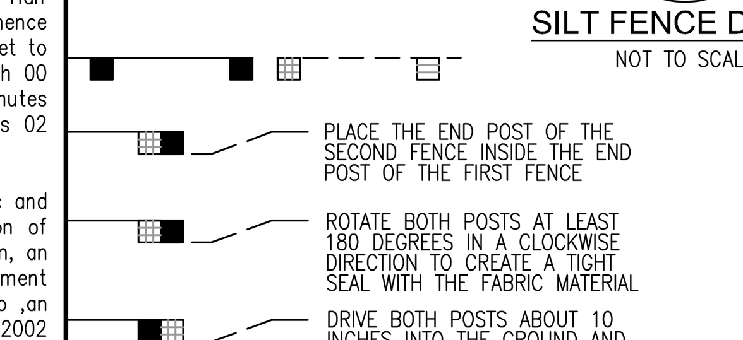
Together with non-exclusive easements for easements for access, ingress of pedestrian and golf cart traffic and for the unobstructed right to use and practice upon the golf course driving range pursuant to Declaration of Easement by and between LO.I. Limited Partnership, an Indiana limited partnership and Indiana Golf Foundation, an Indiana charitable foundation dated September 28, 1999 and recorded October 7, 1999 as Instrument No.1999-29196, as amended by that Certain Easement Amendment by and between LO.I. Limited Partnership ,an Indiana limited partnership and Indiana Golf Foundation,an Indiana charitable foundation dated September 18, 2002 and recorded October 25, 2002 as Instrument No. 2002-035824.

Part of the Southeast Quarter of the Southwest Quarter of Section 1, Township 12 North, Range 4 East of the Second Principal Meridian in Needham Township, Johnson County, Indiana, being part of land conveyed to Frances L Wright as described among the records of Johnson County. Indiana in Deed Book 247, page 200 (hereinafter referred to as the Wright property),being more particularly described as follows:

Beginning at the Northeast corner of said Quarter-Quarter Section and running South 00 degrees 24 minutes 02 seconds West along the East line thereof 34.39 feet to the Southwest corner of land conveyed to Indiana Golf Foundation as described among the records of Johnson County, Indiana in instrument Number 1999-29195; thence departing said East line of said Quarter-Quarter Section and running North 89 degrees 35 minutes 55 seconds West 30.49 feet to the center line of Hurricane Road; thence North 00 degrees 26 minutes 36seconds East 37.76 feet to a point on the North line of the Southeast Quarter of the Southwest Quarter of said Section 1, said point being on the North line of said Wright property; thence South 83 degrees 17 minutes 05 seconds East along the North line of the Southeast Quarter of the Southwest Quarter of Section 1and the North line of said Wright property 30.65 feet to the Point of Beginning.



SILT FENCE DETAIL
NOT TO SCALE



ATTACHING TWO SILT FENCES

ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY STATE OR COUNTY OFFICIALS

INDIANA 811 Know what's below. Call before you dig

CROSSROAD ENGINEERS, PC
Transportation & Development Consultants
115 N. 17th AVENUE, BEECH GROVE, IN 46107 (317) 780-1555

STORMWATER POLLUTION PREVENTION PLAN

EAGLES LANDING

JOB No.	.	DRAWN	LMC	CHECKED	DJM
DATE	APRIL 11, 2024	DESIGNED	DJM	APPR.	GJI

GREGORY J. ILKO REGISTERED No. 10300059 STATE OF INDIANA PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	APPR.
1				
2				
3				
4				
5				
6				
7				
8				
9				

SHEET 301

EARTHWORK

1. SCOPE OF WORK
   - A. 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 OWNER AND THE ENGINEER OF ANY CHANGES, ERRORS OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.
     1. IN GENERAL, THE ITEMS OF WORK TO BE PERFORMED UNDER THIS SECTION SHALL INCLUDE CLEARING AND GRUBBING, REMOVAL OF TREES AND STUMPS, STRIPPING AND STORAGE OF TOPSOIL, FILL COMPACTION AND ROUGH GRADING OF ENTIRE SITE. ALL TREES SHALL BE REMOVED UNLESS OTHERWISE NOTED IN PLANS OR DIRECTED BY OWNER.
     2. EXCAVATED MATERIAL THAT IS SUITABLE MAY BE USED FOR FILLS. ALL UNSUITABLE MATERIAL AND ALL SURPLUS EXCAVATED MATERIAL NOT REQUIRED SHALL BE REMOVED FROM THE SITE. THE LOCATION OF DUMP AND LENGTH OF HAUL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
     3. PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFF THE SITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED. FILL OBTAINED FROM OFF SITE SHALL BE OF KIND AND QUALITY AS SPECIFIED FOR FILLS HEREIN AND THE SOURCE APPROVED BY THE OWNER.
     4. THE CONTRACTOR SHALL ACCEPT THE SITE AS HE FINDS IT AND SHALL REMOVE ALL TRASH, RUBBISH AND DEBRIS FROM THE SITE PRIOR TO STARTING EXCAVATION
2. BENCHMARK
   - A. MAINTAIN CAREFULLY ALL BENCH MARKS, MONUMENTS AND OTHER REFERENCE POINTS; IF DISTURBED OR DESTROYED, CONTRACTOR SHALL CONTACT ENGINEER.
3. REMOVAL OF TREES
   - A. THE INTEGRITY OF THE TOPOGRAPHIC FEATURES (INCLUDING TREES) SHALL BE PERSEVERED AS MUCH AS POSSIBLE THE CONTRACTOR SHALL COORDINATE WITH OWNER AND/OR ENGINEER PRIOR TO CLEARING THE SITE FOR CONSTRUCTION.
   - B. ALL BRUSH, STUMPS, WOOD AND OTHER REFUSE FROM THE TREES REMOVED SHALL BE HAULED TO DISPOSAL AREAS OFF OF THE SITE. DISPOSAL BY BURNING SHALL NOT BE PERMITTED UNLESS PROPER PERMITS ARE OBTAINED (WHERE APPLICABLE).
4. HANDLING OF TOPSOIL
   - A. REMOVE ALL ORGANIC MATERIAL FROM THE AREAS TO BE OCCUPIED BY BUILDINGS, ROADS, WALKS AND PARKING AREAS. PILE AND STORE TOPSOIL AT A LOCATION WHERE IT WILL NOT INTERFERE WITH CONSTRUCTION OPERATIONS. TOPSOIL SHALL BE REASONABLE FREE FROM SUBSOIL, DEBRIS, WEEDS, GRASS, STONES, ETC.
   - B. AFTER COMPLETION OF SITE GRADING AND SUBSURFACE UTILITY INSTALLATION, TOPSOIL SHALL BE REPLACED IN AREAS DESIGNATED ON THE EROSION CONTROL PLAN FOR SEEDING AND/OR SODDING. ANY REMAINING TOPSOIL SHALL BE USED FOR FINISHED GRADING AROUND STRUCTURES AND LANDSCAPING AREAS.
5. DISPOSITION OF UTILITIES
   - A. RULES AND REGULATIONS GOVERNING THE RESPECTIVE UTILITIES SHALL BE OBSERVED IN EXECUTING ALL WORK UNDER THIS SECTION.
   - B. IF ACTIVE UTILITIES ARE ENCOUNTERED BUT NOT SHOWN ON THE DRAWINGS, THE ENGINEER SHALL BE ADVISED BEFORE WORK IS CONTINUED.
   - C. 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 UTILITY COMPANY OR THE ENGINEER.
   - D. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO VERITY 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.
6. SITE GRADING
   - A. GRADES: CONTRACTOR SHALL PERFORM ALL CUTTING, FILLING, COMPACTING OF FILLS AND ROUGH GRADING REQUIRED TO BRING ENTIRE PROJECT AREA TO GRADE AS SHOWN ON THE DRAWINGS.
   - B. ROUGH GRADING: THE TOLERANCE FOR PAVED AREAS SHALL NOT EXCEED 0.10 FEET PLUS OR MINUS ABOVE THE ESTABLISHED SUBGRADE. ALL OTHER AREAS SHALL NOT EXCEED 0.10 FEET PLUS OR MINUS THE ESTABLISHED GRADE. ALL BANKS AND OTHER BREAKS IN GRADE SHALL BE ROUNDED AT THE TOP AND BOTTOM.
   - C. COMPACTION REQUIREMENTS:
     1. ALL BUILDING PAD AREAS SHALL BE COMPACTED TO STANDARDS SPECIFIED BY LOCAL AND/OR STATE BUILDING CODES.
     2. COMPACTION REQUIREMENTS OF PAVED AREAS SHALL BE 95% OF MAXIMUM DRY DENSITY.
7. EARTH WORK BALANCE
   - A. THE CONTRACTOR SHALL CONFIRM ALL EARTHWORK QUANTITIES PRIOR TO START OF CONSTRUCTION. IF AN EXCESS OR SHORTAGE OF EARTH IS ENCOUNTERED, THE CONTRACTOR SHALL CONFIRM WITH THE OWNER AND ENGINEER THE REQUIREMENTS FOR STOCKPILING, REMOVAL OR IMPORTING OF EARTH.

     MINOR ADJUSTMENTS TO THE GRADES MAY BE REQUIRED TO EARTHWORK BALANCES WHEN MINOR EXCESS MATERIAL OR SHORTAGES ARE ENCOUNTERED. IT IS RECOGNIZED BY THE PARTIES HERETO THAT THE CALCULATIONS OF THE ENGINEER IN ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARDS FOR SUCH CALCULATIONS. FURTHER, THAT THESE CALCULATIONS ARE SUBJECT TO THE INTERPRETATIONS OF SOIL BORINGS AS THE PHYSICAL LIMITS IN FINISH GRADE AND COMPACTION PERMITTED THE CONTRACTOR, AND THAT ALL OF THESE PARAMETERS MAY CAUSE EITHER AN EXCESS OR SHORTAGE OF ACTUAL EARTHWORK MATERIALS TO COMPLETE THE PROJECT. IF SUCH AN ACTUAL MINOR EXCESS OR SHORTAGE OF ACTUAL EARTHWORK MATERIALS OCCURS, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO DETERMINE IF ADJUSTMENTS CAN BE MADE TO CORRECT THE IMBALANCE OF EARTH.

STREETS

1. SCOPE OF WORK
   - A. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL CONCRETE AND BITUMINOUS PAVING AND RELATED ITEMS NECESSARY TO COMPLETE THE WORK INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO:
     1. ALL STREETS, PARKING AREAS WITHIN THE CONTRACT LIMITS.
     2. CURBS AND CONCRETE RAMPS.
     3. SIDEWALKS AND CONCRETE SLABS.
     4. IN THE CASE OF ANY CONFLICTS WITH THESE SPECIFICATIONS AND LOCAL, STATE, FEDERAL SPECIFICATIONS THE MORE STRINGENT SHALL APPLY.
   - B. IN THE CASE OF ANY CONFLICTS WITH THESE SPECIFICATIONS AND LOCAL, STATE, FEDERAL SPECIFICATIONS THE MORE STRINGENT SHALL APPLY.
2. PAVEMENT CONSTRUCTION
   - A. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND CONFORM TO THE MINIMUM STANDARDS OF THE CITY OF FRANKLIN ENGINEERING DEPARTMENT, AND IF THERE ARE AREAS UNDEFINED USE THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
   - B. FLEXIBLE PAVEMENT
     1. MATERIALS
        - A. GENERAL: USE LOCALLY AVAILABLE MATERIALS AND GRADATIONS WHICH EXHIBIT A SATISFACTORY RECORD OF PREVIOUS INSTALLATIONS.
        - B. COMPACTED AGGREGATE BASE: SOUND, ANGULAR CRUSHED LIMESTONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED OR PROCESSED AIR-COOLED BLAST FURNACE SLAG. COURSE AGGREGATE SHALL BE CLASS A, TYPE "O" AND CONFORM TO THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
        - C. BASE COURT AGGREGATE: SOUND, ANGULAR CRUSHED STONE, CRUSHED OR UNCRUSHED GRAVEL, OR CRUSHED SLAG, SAND, STONE, OR SLAG SCREENINGS. COARSE AGGREGATES SHALL BE CLASS A OR B AND CONFORM TO I.N.D.O.T. STANDARDS SPECIFICATIONS SECTION 903.
        - D. COARSE AGGREGATE FOR SURFACE AND BINDER MIXTURES: CRUSHED STONE, CRUSHED GRAVEL, CRUSHED SLAB, AND SHARP EDGED NATURAL SAND. SURFACE COARSE AGGREGATES SHALL BE CLASS A AND CONFORM TO I.N.D.O.T. STANDARD SPECIFICATIONS SECTION 903.
        - E. ASPHALT CEMENT: PETROLEUM ASPHALT CEMENT, AP 5 WITH PENETRATION OF 60-70 OR VISCOSITY GRADED ASPHALT CEMENT AC-20 CONFORMING TO THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
        - F. PRIME COAT: MEDIUM-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
        - G. TACK COAT: RAPID-CURE LIQUID ASPHALT OR ASPHALT EMULSION CONFORMING TO THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
        - H. LANE MARKING PAINT: CHLORINATED RUBBER-ALKYD TYPE, AASHTO M248 (FS TT-P-115), TYPE III.
3. ASPHALT-AGGREGATE MIXTURE
   ALL BITUMINOUS MIXTURES ARE TO CONFORM TO CURRENT I.N.D.O.T. SPECIFICATIONS
   - A. SURFACE COURSE: HMA SURFACE 9.5mm
   - B. BINDER COURSE: HMA INTERMEDIATE 19.0mm
   - C. BASE COURSE: TYPE: HMA BASE 25.0mm
     **PROVIDED A JOB MIX FORMULA FOR EACH TYPE OF ASPHALT PRIOR TO THE BEGINNING OF THE CONSTRUCTION PROJECT.
4. SURFACE PREPARATION
   - A. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT.
     - I) PROOF ROLL SUBGRADE SURFACE WITH LOADED TRI-AXLE TRUCK (48 HOUR NOTICE IS REQUIRED TO BE GIVEN TO THE CITY OF FRANKLIN ENGINEERING DEPT.) TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION.
     - II) NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
   - B. AGGREGATE BASE: AFTER PLACEMENT, PROOF ROLL COMPACTED AGGREGATE BASE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION.
     - I) NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT AGGREGATE BASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
     - II) REMOVE LOOSE MATERIAL FROM COMPACTED AGGREGATE BASE SURFACE IMMEDIATELY BEFORE APPLYING PRIME COAT.
5. PLACING THE MIX
   - A. GENERAL: PLACE BITUMINOUS AGGREGATE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE-OFF. SPREAD MIXTURE AT MINIMUM TEMPERATURE OF 225 DEGREES F.(107 DEGREES C). PLACE INACCESSIBLE AND SMALL AREAS BY HAND. PLACE EACH COURSE TO REQUIRED GRADE, CROSS-SECTION, AND COMPACTED THICKNESS.
   - B. BASE COURSE, COMPACTED AGGREGATE: SPREAD AND COMPACT IN TWO LIFTS AS FOLLOWS:
     - I) FIRST LIFT: NO. 5'S SHALL BE A MINIMUM OF 4" OR ½ THE TOTAL DEPTH OF AGGREGATE. EXTEND THE FIRS LIFT 4" OR A DISTANCE EQUAL TO THE DEPTH OF THE LIFT BEYOND THE SECOND LIFT.
     - II) SECOND LIFT: SIZE NO. 53
   - C. PRIME COAT: SUBBASE SURFACE SHALL BE PRIMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
   - D. HOT ASPHALT CONCRETE BINDER COURSE: SPREAD AND ROLL TO MINIMUM FINISH DEPTHS INDICATED ON DETAILS.
   - E. TACK COAT: BINDER COURSE SHALL BE TACKED PRIOR TO THE INSTALLATION OF THE SURFACE COURSE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
   - F. SURFACE COURSE: SPREAD AND ROLL TO MINIMUM FINISH DEPTH INDICATED ON DETAILS. FINISH ELEVATION SHALL BE TRUE TO LINE AND GRADE WITHIN ½" OF TRUE ELEVATIONS.
   - G. PAVER PLACING: PLACE IN STRIPS NOT LESS THAN 10' WIDE, UNLESS OTHERWISE ACCEPTABLE TO ARCHITECT/ENGINEER. AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED, PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. COMPLETE BINDER COURSE FOR A SECTION BEFORE PLACING SURFACE COURSE.
   - H. JOINTS: MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN PAVER PASSES, OR BETWEEN SUCCESSIVE DAYS WORK, TO ENSURE CONTINUOUS BOND BETWEEN ADJOINING WORK. CONSTRUCT JOINTS TO HAVE SAME TEXTURE, DENSITY AND SMOOTHNESS AS OTHER SECTIONS. CLEAN CONTACT SURFACES AND APPLY TACT COAT.
6. ROLLING
   - A. GENERAL: BEGIN ROLLING WHEN MIXTURE WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT.
     - I) COMPACT MIXTURE WITH HOT HAND TAMPERS OR VIBRATING PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.
   - B. BREAKDOWN ROLLING: ACCOMPLISH BREAKDOWN OR INITIAL ROLLING IMMEDIATELY FOLLOWING ROLLING OF JOINTS AND OUTSIDE EDGE. CHECK SURFACE AFTER BREAKDOWN ROLLING, AND REPAIR DISPLACED AREAS BY LOOSENING AND FILLING, IF REQUIRED, WITH HOT MATERIAL.
   - C. SECOND ROLLING: FOLLOW BREAKDOWN ROLLING AS SOON AS POSSIBLE, WHICH MIXTURE IS HOT. CONTINUE SECOND ROLLING UNTIL MIXTURE HAS BEEN THOROUGHLY COMPACTED.
   - D. FINISH ROLLING: PERFORM FINISH ROLLING WHILE MIXTURE IS STILL WARM ENOUGH FOR REMOVAL OF ROLLER MARKS. CONTINUE ROLLING UNTIL ROLLER MARKS ARE ELIMINATED AND COURSE HAS ATTAINED MAXIMUM DENSITY.
   - E. PATCHING: REMOVE AND REPLACE PAVING AREAS MIXED WITH FOREIGN MATERIALS AND DEFECTIVE AREAS. CUT OUT SUCH AREAS AND FILL WITH FRESH, HOT BITUMINOUS AGGREGATE MIX. COMPACT BY ROLLING TO MAXIMUM SURFACE DENSITY AND SMOOTHNESS.
   - F. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED.
   - G. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
7. TRAFFIC AND LANE MARKINGS
   - A. CLEANING: SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
   - B. STRIPPING: USE CHLORINATED RUBBER BASE TRAFFIC LANE-MARKING PAINT, FACTORY MIXED, QUICK-DRYING, AND NON-BLEEDING.
     COLOR: WHITE
     - I) DO NOT APPLY TRAFFIC AND LANE MARKING PAINT UNTIL LAYOUT AND PLACEMENT HAS BEEN VERIFIED WITH ARCHITECT/ENGINEER.
     - II) APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES.
8. FIELD QUALITY CONTROL
   - A. TESTING AND INSPECTION SERVICE:
     - I) OWNER SHALL EMPLOY A TESTING LABORATORY TO PERFORM PAVEMENT TESTING AND INSPECTION SERVICE FOR QUALITY CONTROL DURING PAVING OPERATIONS.
     - II) TESTING SERVICE SHALL HAVE REPRESENTATIVE PRESENT TO OBSERVE AND PERFORM TESTS AT ALL TIMES PAVING WORK IS IN PROGRESS.
   - B. GENERAL: TESTING SERVICE REPRESENTATIVE SHALL TAKE A MINIMUM OF TWO SAMPLES PER LIFT OF BITUMINOUS AGGREGATE MIX EACH DAY BEFORE PAVING OPERATION. LABORATORY TEST SHALL BE PERFORMED ON THESE SAMPLES TO DETERMINE AGGREGATE GRADATION AND ASPHALT CONTENT.
     - I) TEST IN-PLACE COMPACTED BITUMINOUS AGGREGATE MIX COURSES FOR COMPLIANCE WITH REQUIREMENTS FOR THICKNESS, DENSITY AND AIR VOIDS AND SURFACE SMOOTHNESS. REPAIR OR REMOVE AND REPLACE UNACCEPTABLE PAVING AS DIRECTED BY ENGINEER.
     - II) A TEST SECTION AT A MINIMUM SIZE OF 100'X12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY PRIOR TO FULL PRODUCTION FOR EACH TYPE OF MIX. THE TEST SECTION SHALL BE COMPACTED TO DETERMINE A TARGET DENSITY FOR THE REMAINDER OF THE PAVEMENT.
   - C. THICKNESS: IN-PLACE COMPACTED THICKNESS WILL NOT BE ACCEPTABLE IF EXCEEDING FOLLOWING ALLOWABLE VARIATION FROM REQUIRED THICKNESS:
     AGGREGATE BASE COURSE: ½", PLUS OR MINUS
     BASE COURSE: ½", PLUS OR MINUS
     BINDER COURSE: ¼", PLUS OR MINUS
     SURFACE COURSE: ¼", PLUS OR MINUS
     - I) A MINIMUM OF TWO PAVEMENT CORES PER COMPACTED LIFT SHALL BE TAKEN. CORES ARE TO BE TAKEN AT LOCATIONS AND AT TIMES OF DAY AS DIRECTED BY THE TESTING SERVICE. THE FOLLOWING TESTS SHALL BE PERFORMED BY THE TESTING SERVICE, ON EACH PAVEMENT CORE:
     - II) A TEST SECTION AT A MINIMUM SIZE OF 100'X12' SHALL BE PLACED AT A LOCATION AS DIRECTED BY THE COUNTY PRIOR TO FULL PRODUCTION FOR EACH TYPE OF MIX. THE TEST SECTION SHALL BE COMPACTED TO DETERMINE A TARGET DENSITY OF THE REMAINDER OF THE PAVEMENT.
   - D. PAVEMENT THICKNESS
     DENSITY
     AIR VOIDS
     - I) TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ARCHITECT/ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE, WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION.
     - II) PAVEMENT WHICH FAILS TO COMPLY WITH APPROVED JOB MIX FORMULA SHALL BE REPLACED AS DIRECTED BY THE ARCHITECT/ENGINEER.
   - E. SURFACE SMOOTHNESS: TEST FINISHED SURFACE FOR SMOOTHNESS, USING 10' STRAIGHTEDGE APPLIED PARALLEL WITH, AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS.
     AGGREGATE BASE COURSE SURFACE:1/4"
     BASE COURSE SURFACE: 1/4"
     BINDER COURSE SURFACE: 1/8"
     WEARING COURSE SURFACE: 1/8"
     - I) CHECK SURFACED AREAS AT INTERVALS AS DIRECTED BY TESTING SERVICE.
   - F. DENSITY TESTS: DENSITY TESTS SHALL BE MADE AT EACH LIFT. TEST SHALL BE AS FOLLOWS:
     - I) TESTS WILL BE REQUIRED AT VARIOUS TIMES AND LOCATIONS FOR SUBGRADE AND BASE COURSES FOR ASPHALT PAVING AREAS.
   - G. TESTING SERVICE SHALL SUBMIT CERTIFIED RESULTS TO THE OWNER AND ENGINEER WITHIN 72 HOURS AFTER TESTS ARE MADE WITH THEIR COMMENTS AND RECOMMENDATIONS FOR ACTION.
     - I) SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION. NO TRAFFIC SHALL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING.
     - II) SEE SITE GRADING, UNDER THE 'EARTHWORK' SECTION FOR ADDITIONAL COMPACTION REQUIREMENTS.
9. APPLICATION
   - A. GRADING: DO ANY NECESSARY GRADING IN ADDITION TO THAT PERFORMED IN ACCORDANCE WITH EARTHWORK SECTION TO BRING SUBGRADES, AFTER FINAL COMPACTION, TO THE REQUIRED GRADES AND SECTIONS FOR SITE IMPROVEMENTS.
   - B. PREPARATION OF SUBGRADE: REMOVE SPONGY AND OTHERWISE UNSUITABLE MATERIAL AND REPLACE WITH STABLE MATERIAL. NO TRAFFIC WILL BE ALLOWED ON PREPARED SUBGRADE PRIOR TO PAVING.
   - C. COMPACTION OF SUBGRADE: THE FIRST 6 INCHES BELOW THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 100% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE PROVISIONS OF AASHO T-99. WATER SHALL BE PREVENTED FROM STANDING ON THE COMPACTED SUBGRADE.
   - D. UTILITY STRUCTURES: CHECK FOR CORRECT ELEVATION OF ALL MANHOLE COVERS, VALVE BOXES AND SIMILAR STRUCTURES LOCATED WITHIN AREAS TO BE PAVED, AND MAKE, OR HAVE MADE, ANY NECESSARY ADJUSTMENTS IN SUCH STRUCTURES.
   - E. PLACING CONCRETE
     1. SUBGRADE: PLACE CONCRETE ONLY ON A MOIST, COMPACTED SUBGRADE OR BASE FREE FROM LOOSE MATERIAL. PLACE NO CONCRETE ON A MUDDY OR FROZEN SUBGRADE.
     2. FORMS: ALL FORMS SHALL BE FREE FROM WARP, TIGHT 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.
     3. PLACING CONCRETE: CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS LITTLE REHANDLING AS PRACTICABLE. WHEN CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES F. OR LESS, THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATIONS SHALL BE FOLLOWED.
   - F. CONCRETE CURB
     1. EXPANSION JOINTS: SHALL BE 1/2 INCH THICK PREMOULDED AT ENDS OF ALL RETURNS AND AT A MAXIMUM SPACING OF 100 FEET.
     2. CONTRACTION JOINTS UNLESS OTHERWISE PROVIDED, CONTRACTION JOINTS SHALL BE SAWED JOINTS SPACED 10 FEET ON CENTER.
     3. FINISH: TAMP AND SCREED CONCRETE AS SOON AS PLACED, AND FILL ANY HONEY COMBED PLACES. FINISH SQUARE CORNERSTONE 1/4 INCH RADIUS AND OTHER CORNERS TO RADII SHOWN.
   - G. CONCRETE WALKS AND EXTERIOR STEPS
     1. SLOPES: PROVIDE ¼ INCH PER FOOT CROSS SLOPE. MAKE ADJUSTMENTS ON SLOPES AT WALK INTERSECTIONS AS NECESSARY TO PROVIDE PROPER DRAINAGE.
     2. DIMENSIONS: WALKS AND STEPS SHALL BE ONE COURSE CONSTRUCTION AND OF WIDTHS AND DETAILS SHOWN ON THE DRAWINGS.
     3. FINISH: SCREED CONCRETE AND TROWEL WITH A STEEL TROWEL TO A HARD DENSE SURFACE AFTER SURFACE WATER HAS DISAPPEARED. APPLY MEDIUM BROOM FINISH AND SCRIBE TRANSVERSE JOINTS AT 6 FOOT SPACING. PROVIDE ½ INCH EXPANSION JOINTS WHERE SIDEWALKS INTERSECT, AND AT A MAXIMUM SPACING OF 48 FEET BETWEEN EXPANSION JOINTS.
   - H. CURING CONCRETE FOR WALKS AND CURBS: EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
   - I. BITUMINOUS PAVEMENT: HOT MIX ASPHALT PAVEMENT SHALL BE AS SPECIFIED IN THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION. PAVING WILL NOT BE PERMITTED DURING UNFAVORABLE WEATHER OR THEN THE TEMPERATURE IS 40 DEGREES F. AND FALLING.
   - J. COMPACTED AGGREGATE SUBBASE: THE THICKNESS SHOWN ON THE DRAWINGS IS THE MINIMUM THICKNESS OF THE FULL COMPACTED SUBBASE. 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 OR WITH APPROVED HAND TAMPERS.
   - K. CONCRETE RAMPS
     1. CONCRETE RAMPS FOR THE DISABLED SHALL BE REQUIRED AS SPECIFIED IN THE PLANS AND SHALL CONFORM WITH CURRENT SPECIFICATIONS ESTABLISHED BY THE AMERICAN DISABILITIES ACT (ADA), SECTION 4.7, "CURB RAMPS."
     2. THE CONCRETE RAMP SHALL BE FLUSH AND FREE OF ABRUPT CHANGES WITH SIDEWALKS, GUTTERS OR STREETS, AND PROVIDE A MAXIMUM SLOPE OF 1:12.
     3. THE MINIMUM WIDTH OF A CONCRETE RAMP SHALL BE (48) INCHES EXCLUSIVE OF FLARED SIDES.
     4. SIDES OF CONCRETE RAMPS SHALL HAVE FLARED SIDES AS SHOWN IN THE PLANS.

STORM SEWER SYSTEMS

1. SCOPE OF WORK
   - A. THE WORK UNDER THIS SECTION INCLUDES ALL STORM SEWERS, STORM WATER INLETS, AND RELATED ITEMS, INCLUDING EXCAVATING AND BACKFILLING NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS.
   - B. IN THE CASE OF ANY CONFLICTS WITH THESE SPECIFICATIONS AND LOCAL, STATE, FEDERAL SPECIFICATIONS THE MORE STRINGENT SHALL APPLY.
2. STORM SEWER CONSTRUCTION
   - A. STORM SEWERS
     1. STORM SEWER STRUCTURES SHALL COMPLY WITH CURRENT SPECIFICATIONS OF THE CITY OF FRANKLIN AND ALL OTHER RESPONSIBLE AGENCIES IN RESPECT TO DESIGN AND QUALITY OF CONSTRUCTION.
     2. ALL STORM SEWER CONSTRUCTION INSIDE PUBLIC RIGHT-OF-WAY, EITHER EXISTING OR TO BE DEDICATED, SHALL BE IN ACCORDANCE WITH THE MOST CURRENT I.N.D.O.T. STANDARD SPECIFICATION.
     3. WHERE REINFORCED CONCRETE PIPE IS SHOWN ON THE CONSTRUCTION PLANS, IT SHALL BE IN ACCORDANCE WITH A.S.T.M. C-76 CLASS III WALL "C" UNLESS OTHERWISE SPECIFIED ON THE PLANS.
     4. WHERE CORRUGATED METAL PIPE IS SHOWN ON THE CONSTRUCTION PLANS, IT SHALL BE 14 GAUGE ALUMINIZED UNLESS OTHERWISE SPECIFIED AND SHALL HAVE THE CONNECTING BANDS AND SEALS AS SPECIFIED BY THE MANUFACTURER. C.M.P. SHALL BE ALUMINIZED PIPE IN ACCORDANCE WITH A.S.T.M. A-444.
     5. MANHOLES, CATCH BASINS AND INLETS SHALL BE PRECAST CONCRETE.
        A. IF THE CONTRACTOR ELECTS TO USE ALTERNATE PRECAST STRUCTURES, HE SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER PRIOR TO ANY CONSTRUCTION.
     6. PRECAST CONCRETE AND STEEL FOR MANHOLES AND INLETS SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478.
     7. CASTINGS SHALL BE AS SHOWN ON THE DETAIL SHEET(S) FOR MANUFACTURER, TYPE AND MODEL NUMBER.
     8. GRANULAR BACKFILL SHALL BE REQUIRED UNDER ALL PAVEMENT AREAS AND TRENCHES WITHIN FIVE(5) FEET OF THE EDGE OF PAVEMENT.
     9. ALL TRENCHES UNDER PAVEMENT SHALL BE COMPACTED TO 95 PERCENT MODIFIED PROCTOR.
3. APPLICATION
   - A. PERMITS AND CODES: THE INTENT OF THIS SECTION OF THE SPECIFICATIONS IS THAT THE CONTRACTOR'S BID ON THE WORK COVERED HEREIN SHALL BE BASED UPON THE DRAWINGS AND SPECIFICATIONS BUT THAT THE WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AS AMENDED BY ANY WAIVERS. THE CONTRACTOR SHALL FURNISH ALL BONDS NECESSARY TO GET PERMITS FOR CUTS AND CONNECTIONS TO EXISTING SEWERS.
   - B. LOCAL STANDARDS: THE TERM "LOCAL STANDARDS" AS USED HEREIN MEANS THE STANDARDS OF DESIGN AND CONSTRUCTION OF THE RESPECTIVE MUNICIPAL DEPARTMENT OR UTILITY COMPANY.
   - C. EXISTING IMPROVEMENTS: THE CONTRACTOR SHALL MAINTAIN IN OPERATING CONDITION ALL ACTIVE UTILITIES, SEWERS AND OTHER DRAINS ENCOUNTERED IN THE SEWER INSTALLATION. THE CONTRACTOR SHALL REPAIR TO THE SATISFACTION OF THE OWNER ANY DAMAGE TO EXISTING ACTIVE IMPROVEMENTS.
   - D. WORKMANSHIP: THIS WORK SHALL CONFORM TO ALL LOCAL, STATE AND NATIONAL CODES AND TO BE APPROVED BY ALL LOCAL AND STATE AGENCIES HAVING JURISDICTION.
   - E. TRENCHING: LAY ALL PIPE IN OPEN TRENCHES, EXCEPT WHEN THE LOCAL AUTHORITY GIVES WRITTEN PERMISSION FOR TUNNELING. OPEN THE TRENCH SUFFICIENTLY AHEAD OF PIPE-LAYING TO REVEAL ANY OBSTRUCTIONS. THE MIN. WIDTH OF TRENCH SHALL BE 1.25 TIMES THE OUTSIDE DIA. OF PIPE. 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 PIPE OR APPURTENANCES BE LAID IN STANDING WATER. CONDUCT THE DISCHARGE FROM TRENCH DE-WATERING TO DRAINS OR NATURAL DRAINAGE CHANNELS.
   - F. 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.
   - G. BACKFILLING: BACKFILL SHALL BE PLACED AS SHOWN IN THE PLANS. NOTE THAT PVC & HDPE PIPE SHALL BE COVERED WITH 12" MINIMUM OF #8 STONE. COMPACT THIS BACKFILL THOROUGHLY, TAKING CARE NOT TO DISTURB THE PIPE. BACKFILL UNDER AND WITHIN 5 FEET OF WALKS, PARKING AREAS, DRIVEWAYS AND STREETS SHALL BE "B" BORROW OR EQUIVALENT GRANULAR MATERIAL ONLY AND THOROUGHLY COMPACTED BY APPROVED METHODS.
   - H. MANHOLE INVERTS: CONSTRUCT MANHOLE FLOW CHANNELS OF CONCRETE SEWER PIPE OR BRICK, SMOOTHLY FINISHED AND OF SEMICIRCULAR SECTION CONFORMING TO THE INSIDE DIAMETER OF THE CONNECTING SEWERS. MAKE CHANGES IN SIZE OR GRADE GRADUALLY AND CHANGES INDIRECTION BY TRUE CURVES. PROVIDE SUCH CHANNELS FOR ALL CONNECTING SEWERS AT EACH MANHOLE.
   - I. SUBDRAINS: ALL SUBDRAINS SHALL BE OF THE SIZE SHOWN ON THE PLANS AND SHALL BE CONSTRUCTED TO THE GRADES SHOWN. ALL DRAINS CONSTRUCTED OFF-SITE AS PART OF THE OUTLET DRAIN WILL BE LOCATED AS SHOWN.
   - J. UTILITIES: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERITY ALL EXISTING UTILITIES AND CONDITIONS PERTAINING TO HIS 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 OWNER AND THE ENGINEER OF ANY CHANGES, ERRORS OR OMISSIONS FOUND ON THESE PLANS OR IN THE FIELD BEFORE WORK IS STARTED OR RESUMED.

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CROSSROAD ENGINEERS, PC
Transportation & Development Consultants
115 N. 17th AVENUE, BEECH GROVE, IN 46107 (317) 780-1555

SHEET 400

SPECIFICATIONS

EAGLES LANDING

JOB No.	.	DRAWN	LMC	CHECKED	DJM
DATE	APRIL 11, 2024	DESIGNED	DJM	APPR.	GJI

GREGORY J. ILKO REGISTERED No. 10300059 STATE OF INDIANA PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	APPR.
1				
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