

# CITY OF WEST LAFAYETTE, INDIANA

DRAWINGS FOR

## SHERATON AND FAIRWAY KNOLLS LIFT STATION IMPROVEMENTS

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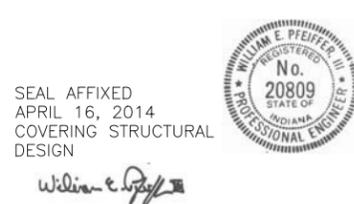
DAVID M. BUCK, P.E.



**GREELEY AND HANSEN**

7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

APRIL 2014

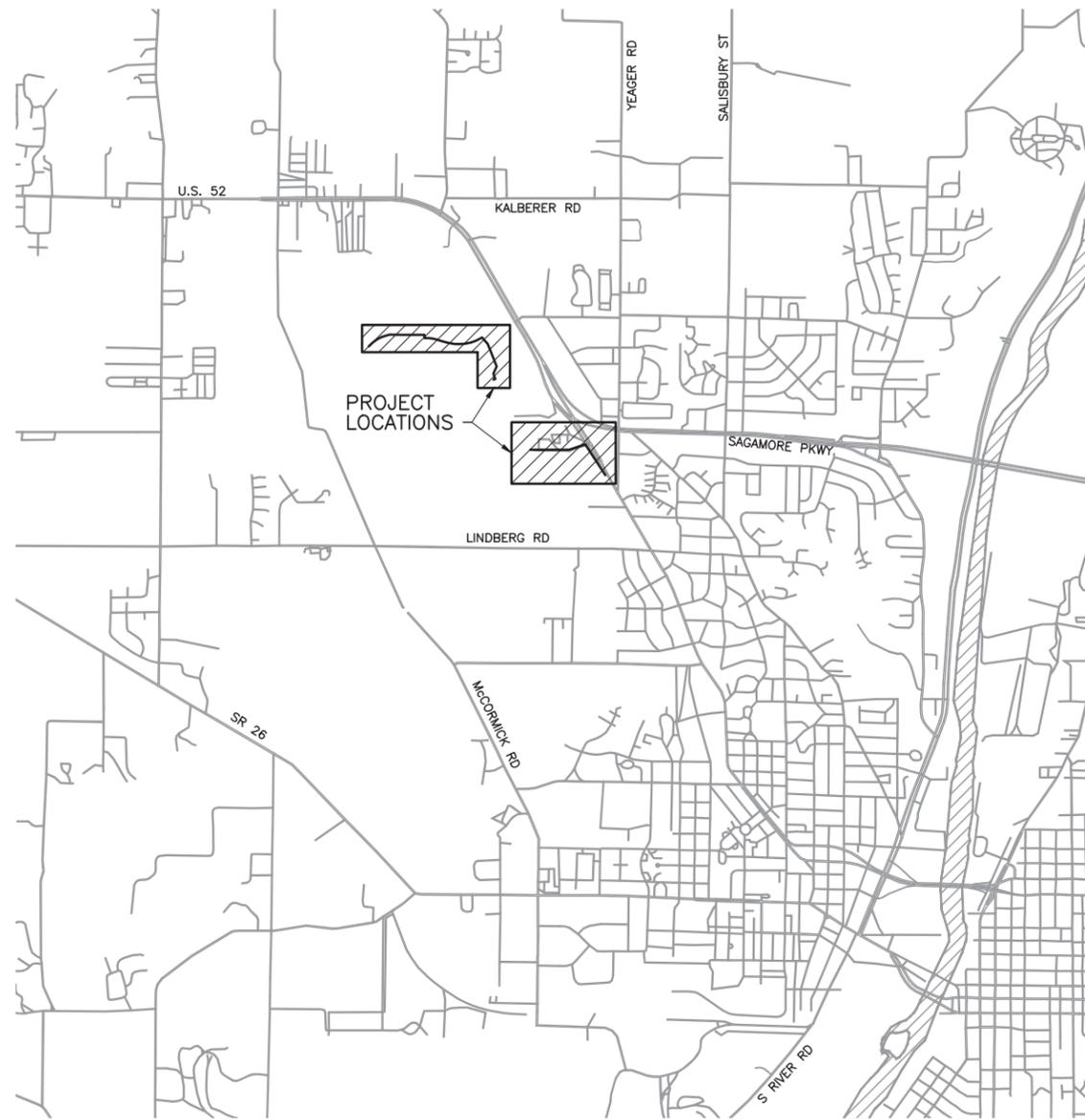


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**OPERATING AUTHORITIES**

SANITARY/STORM/STREETS	GAS:	TELECOMMUNICATIONS:
DAVID BUCK, P.E. WEST LAFAYETTE ENGINEER 609 NAVAJO DRIVE WEST LAFAYETTE, IN 47906 (765) 775-5130	JASON LUCAS VECTREN 1995 E. MAIN STREET DANVILLE, IN 46122 (317) 718-3616	TED FOSTER FRONTIER COMMUNICATIONS 3216 IMPERIAL PKWY LAFAYETTE, IN 47909 (765) 423-3531
<b>FIRE DEPARTMENT:</b> MIKE FRANCIS, CAPTAIN WEST LAFAYETTE FIRE DEPT 300 NORTH STREET WEST LAFAYETTE, IN 47906 (765) 775-5177	<b>ELECTRIC:</b> CINDY KERKER TIPMONT REMC 403 S. MAIN STREET LINDEN, IN 47955 (765) 463-1314 EXT. 214	ERIC GEORGE PURDUE RESEARCH FOUNDATION 1281 WIN HENTSCHEL BLVD. WEST LAFAYETTE, IN 47906 (765) 588-1055
<b>WATER:</b> BRANDON FRANCE INDIANA-AMERICAN WATER CO. 1007 HAPPY HOLLOW ROAD WEST LAFAYETTE, IN 47906 (765) 743-7973, EXT. 14	JORDAN WALLPE DUKE ENERGY 3395 GREENBUSH STREET LAFAYETTE, IN 47905 (765) 446-4010	JERRY SHUTTERS COMCAST COMMUNICATIONS 1002 E. CENTER ROAD KOKOMO, IN 46902 (765) 455-5935
<b>SANITARY SEWER:</b> SCOTT LODS AMERICAN SUBURBAN UTILITIES 3350 W. 250 NORTH WEST LAFAYETTE, IN 47906 (765) 463-3856	GARY MCNAMEE DUKE ENERGY ASSET PROTECTION 2727 CENTRAL AVENUE COLUMBUS, IN 47201 (812) 375-2021	JEFF KETTERER METRONET 3701 COMMUNICATIONS WAY EVANSVILLE, IN 47715 (317) 599-1192



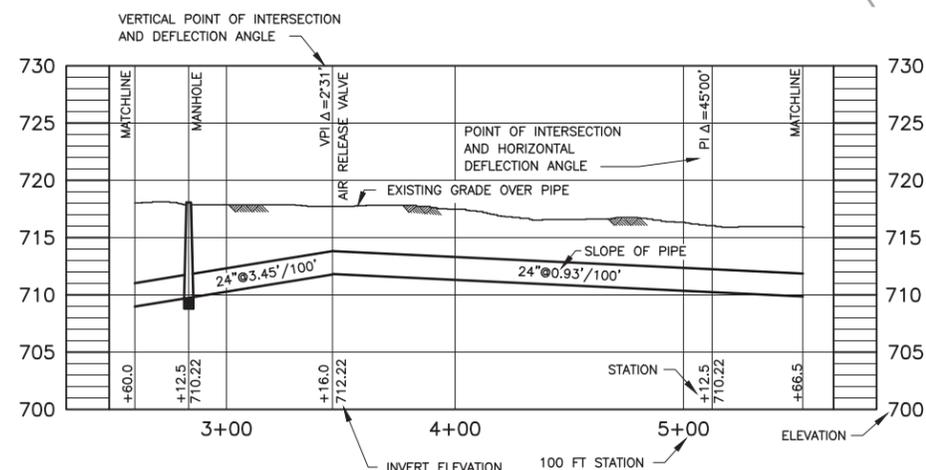
**LOCATION MAP**  
SCALE: 1"=2000'

**GENERAL NOTES:**

- HORIZONTAL CONTROL IS BASED ON THE INDIANA STATE PLANE COORDINATE SYSTEM NAD 1983 WEST ZONE. ALL ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM 1988.
- LOCATIONS AND ELEVATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO BEGINNING WORK. VERIFY THE LOCATIONS, ELEVATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THE WORK PRIOR TO CONSTRUCTION.
- EXPOSE ALL EXISTING UTILITIES WELL IN ADVANCE OF CROSSING WITH NEW FORCE MAIN AND SEWER INSTALLATION TO ALLOW FOR GRADE ADJUSTMENT AT NO ADDITIONAL COST. IF REQUIRED AFTER FIELD VERIFICATION, ADJUST ALIGNMENT AND GRADE OF NEW PIPELINES AS DIRECTED BY THE ENGINEER.
- SUPPORT, PROTECT AND RESTORE ALL UTILITIES AND APPURTENANCES AS REQUIRED TO COMPLETE ALL THE WORK. OVERHEAD UTILITY POLE HANDLING BY CONTRACTOR.
- WHERE NEW SANITARY SEWER CROSSES OVER OR UNDER EXISTING WATER MAINS, PROVIDE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.
- PROVIDE A MINIMUM 4 FEET OF COVER OVER ALL FORCE MAIN PIPE.
- IF FIELD TILE IS ENCOUNTERED DURING CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ENGINEER OF THEIR FINDINGS. IF DAMAGED BY CONTRACTOR, REPAIR AT NO ADDITIONAL COST TO OWNER.
- CONTAIN CONSTRUCTION OPERATIONS WITHIN THE LIMITS OF THE RIGHT-OF-WAY, EASEMENTS AND LIMITS INDICATED ON THE DRAWINGS AND USE CARE IN PLACING MATERIALS AND EQUIPMENT SO AS TO CAUSE THE LEAST POSSIBLE DAMAGE TO PROPERTY AND RESTORE PROPERTY TO PRECONSTRUCTION CONDITIONS.
- COMPLETE WORK UNDER THE CONSTRAINTS IN SPECIFICATION SECTION 01110.
- ALL CONSTRUCTION ACTIVITY TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE OSHA STANDARDS FOR WORKER SAFETY.
- PROVIDE TEMPORARY CONSTRUCTION FENCE AROUND OPEN EXCAVATIONS.
- FOR CONTRACTOR'S CONVENIENCE, AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN SUBMITTED TO THE TIPPECANOE COUNTY WATER AND SOIL CONSERVATION DISTRICT IN ACCORDANCE WITH RULE 5 STORMWATER PERMIT REQUIREMENTS. CONTRACTOR MAY DEVELOP AND SUBMIT A SEPARATE EROSION CONTROL PLAN. SEE SPECIFICATIONS.
- A DISTINCTION BETWEEN NEW AND EXISTING MATERIALS, EQUIPMENT AND STRUCTURES HAS BEEN MADE ON THE DRAWINGS BY LINE WEIGHT. HEAVY (OR) BOLD REPRESENTS NEW AND LIGHT REPRESENTS EXISTING.
- ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE GENERAL NOTES SHALL BE INCLUDED IN VARIOUS CONTRACT ITEMS, AND NO SEPARATE PAYMENT WILL BE MADE.
- IN RESOLVING CONFLICTS, ERRORS, DISCREPANCIES AND DISPUTES CONCERNING THE SCOPE OF WORK TO BE PERFORMED BY THE CONTRACTOR, AND OTHER RIGHTS AND OBLIGATIONS OF OWNER AND CONTRACTOR, THE DOCUMENT EXPRESSING THE GREATER QUANTITY, QUALITY OR OTHER SCOPE OF WORK IN QUESTIONS, OR IMPOSING THE GREATER OBLIGATION UPON CONTRACTOR AND AFFORDING THE GREATER RIGHT OR REMEDY TO OWNER SHALL GOVERN AS ENUMERATED IN THE AGREEMENT.

**LEGEND**

■	BEEHIVE STORM INLET	○	SANITARY MANHOLE
—BT—	BURIED TELEPHONE	—SS—	SANITARY SEWER
●	CONTROL POINT	—ST—	STORM SEWER
⊙	SOIL BORING	○	SIGN
■	CURB STORM INLET	× 685.8	SPOT ELEVATION
■	CURB STORM INLET PROTECTION	(000.00)	NEW PAVEMENT GRADE
—D—	DRAIN	(000.00)	ALL OTHER FINISH GRADES
—E—	ELECTRIC	■	STORM INLET
000	EXISTING CONTOUR	■	TELEPHONE PEDESTAL
—X—	FENCE	⊙	TREE
—FO—	FIBER OPTIC	⊙	TREE/BRUSH LINE
⊙	FIRE HYDRANT	---	UTILITY AND DRAINAGE EASEMENT
—	FLOW LINE	—W—	WATER
—FM—	FORCE MAIN	---	WET LAND
—GW—	GUY WIRE	---	CONSTRUCTION LIMITS
⊙	LIGHT POLE	—SF—	SILT FENCING
—G—	NATURAL GAS	■	WATER METER
—OU—	OVERHEAD UTILITIES	⊙	WATER VALVE
—PL—	PROPERTY LINE	■	WET LAND FLAG
—RW—	RIGHT OF WAY		



**PROFILE**  
NOT TO SCALE

**CONTROL POINTS SET**

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM #9	1898007.35	2994048.66	688.72	CHISELED X IN CONCRETE LIGHT BASE WEST ENTRANCE OF WAL-MART 100' SOUTH OF CUMBERLAND AVE.
TBM #10	1897296.05	2994262.15	691.54	CHISELED X IN FIRE HYDRANT FLANGE BOLT, 60'± NORTH OF NW CORNER OF WAL-MART BUILDING.
TBM #20	1897296.05	2994262.15	718.57	MAG SPIKE ON POWER POLE 029-934 ON SW SIDE OF NORTHWESTERN AVE 300' S OF NEIL ARMSTRONG STREET.
TBM #21	1897296.05	2994262.15	717.71	CHISELED X ON FIRE HYDRANT NE FLANGE BOLT ON THE SW SIDE OF THE INTERSECTION OF NEIL ARMSTRONG STREET AND PALMER DRIVE.
TBM #22	1897296.05	2994262.15	687.43	CHISELED X ON FIRE HYDRANT NW FLANGE BOLT ON THE S SIDE OF PALMER DRIVE WEST OF THE INTERSECTION WITH BURKE COURT.

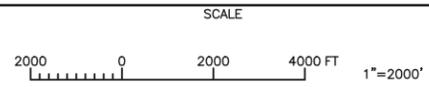
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7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

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APRIL 16, 2014  
*Joseph Jansch*



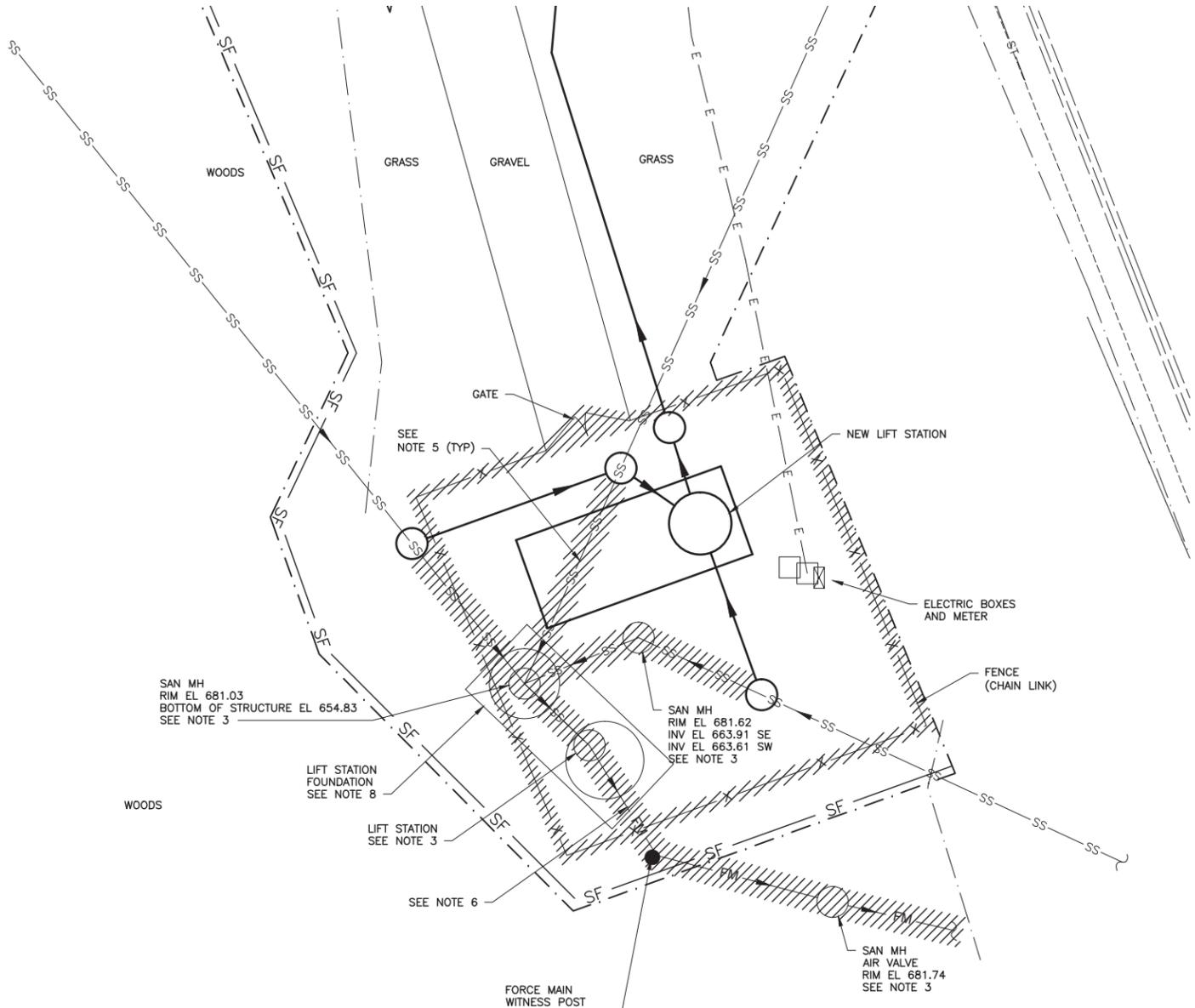
NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL INDEX, GENERAL NOTES,  
LEGEND AND LOCATION MAP

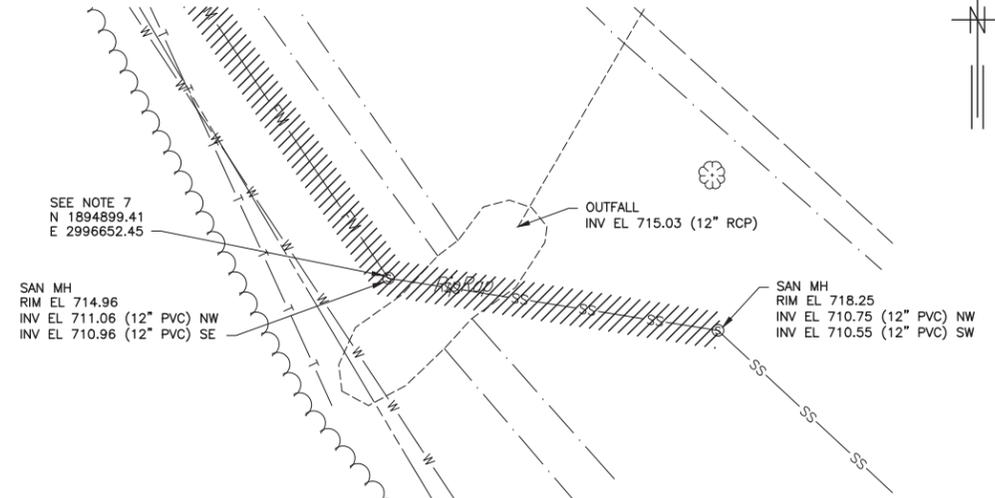
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DATE	APRIL 2014
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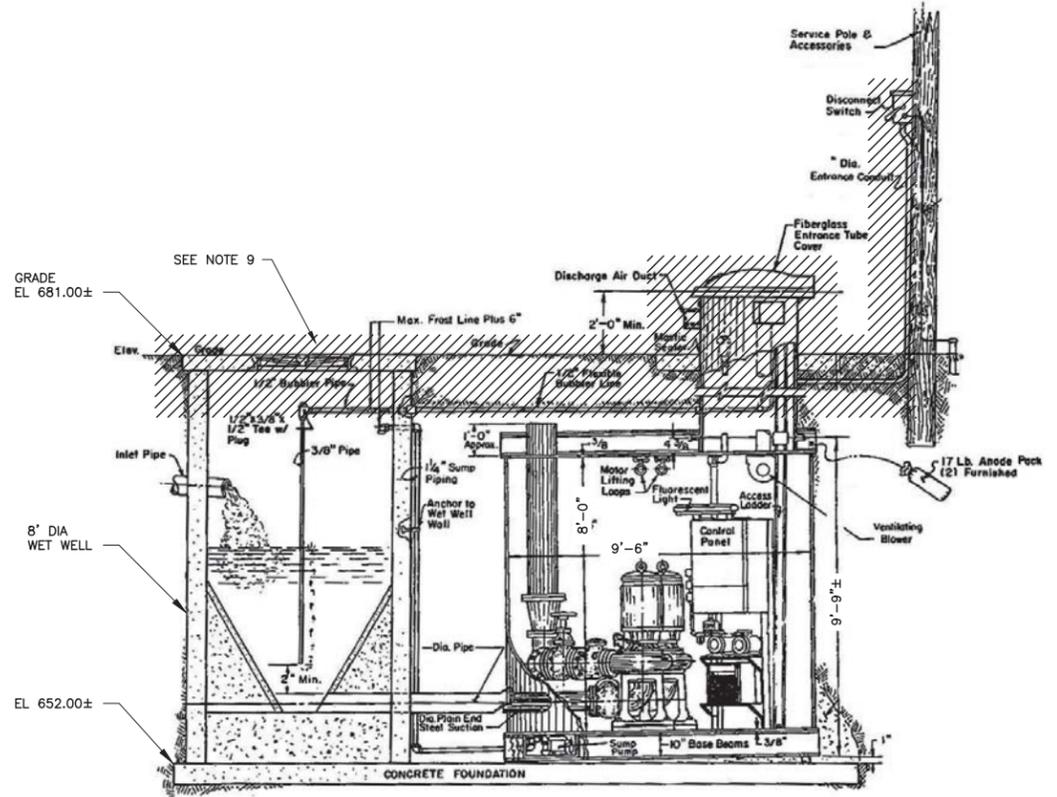
**PLAN - DEMOLITION**  
SCALE: 1"=10'

**LIFT STATION DEMOLITION NOTES:**

- CROSS HATCH INDICATES REMOVAL OF STRUCTURES, PIPING AND EQUIPMENT.
- CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BIDDING PROJECT TO SEE EXTENT OF THE DEMOLITION WORK INVOLVED AND TO INCLUDE THE NECESSARY WORK IN BID.
- DEMOLISH EXISTING LIFT STATION AND MANHOLES TO 24" BELOW GRADE. FILL LIFT STATION, MANHOLES AND WET WELL WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH NO. 53 COMPACTED AGGREGATE. VENT STRUCTURES DURING FLOWABLE FILL INSTALLATION TO ENSURE NO VOIDS ARE CREATED.
- ALL ABOVE GROUND ELECTRICAL COMPONENTS, CONDUIT AND WIRING, ANTENNA TOWER, AND SUPPORT STRUCTURES SHALL BE DE-ENERGIZED, DISCONNECTED AND REMOVED.
- SEWERS BETWEEN NEW MANHOLES AND EXISTING LIFT STATION TO BE ABANDONED IN PLACE AND FILLED WITH FLOWABLE FILL.
- ABANDON FORCE MAIN IN PLACE. FILL ENTIRE FORCE MAIN WITH FLOWABLE FILL. COLLECT AND PROPERLY DISPOSE OF SEWAGE THAT IS PUSHED OUT OF THE FORCE MAIN BY THE FLOWABLE FILL. ASSUME 80 CYS OF FLOWABLE FILL REQUIRED.
- DEMOLISH EXISTING MANHOLE TO 24" BELOW GRADE. FILL SANITARY SEWER AND MANHOLE WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH SOIL, COMPACT AND SEED. EXCAVATION TO BE ENCLOSED WITH CONSTRUCTION FENCE AND SILT FENCE.
- LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
- INSTALL A 5'x5'x12" THICK CLASS D CONCRETE CAP WITH #4 REINFORCING STEEL AT 12" ON CENTER EACH WAY. CONCRETE CAP IS TO BE CENTERED OVER THE LIFT STATION CHIMNEY (MAN WAY ACCESS) WITH THE TOP OF THE SLAB 2" BELOW FINISHED GRADE. INSTALL RX WATERSTOP BETWEEN THE CAP AND LIFT STATION CHIMNEY 3" FROM THE BASE OF THE CAP.



**PLAN - SHERATON LIFT STATION  
FORCE MAIN DISCHARGE**  
SCALE: 1"=10'



**SECTION - DEMOLITION**  
SCALE: NOT TO SCALE

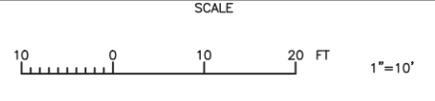
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INDIANAPOLIS, INDIANA 46278

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SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

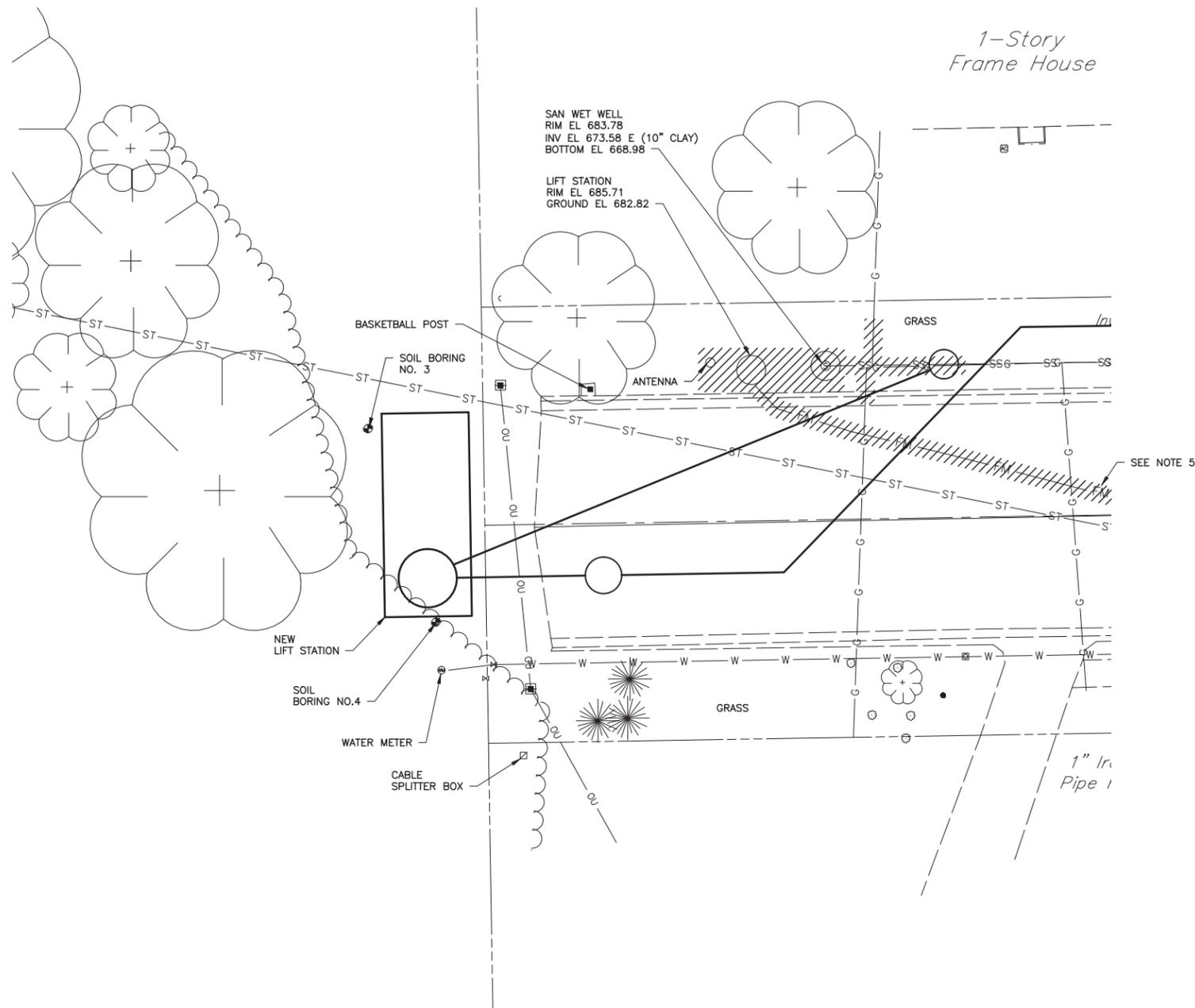
GENERAL  
DEMOLITION PLAN AND SECTION  
SHERATON LIFT STATION

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SHEET	2 OF 24
DATE	APRIL 2014
REV	0



DISCHARGE  
MH NO. 250472  
SEE NOTE 5  
N 1895590.41  
E 2996335.81

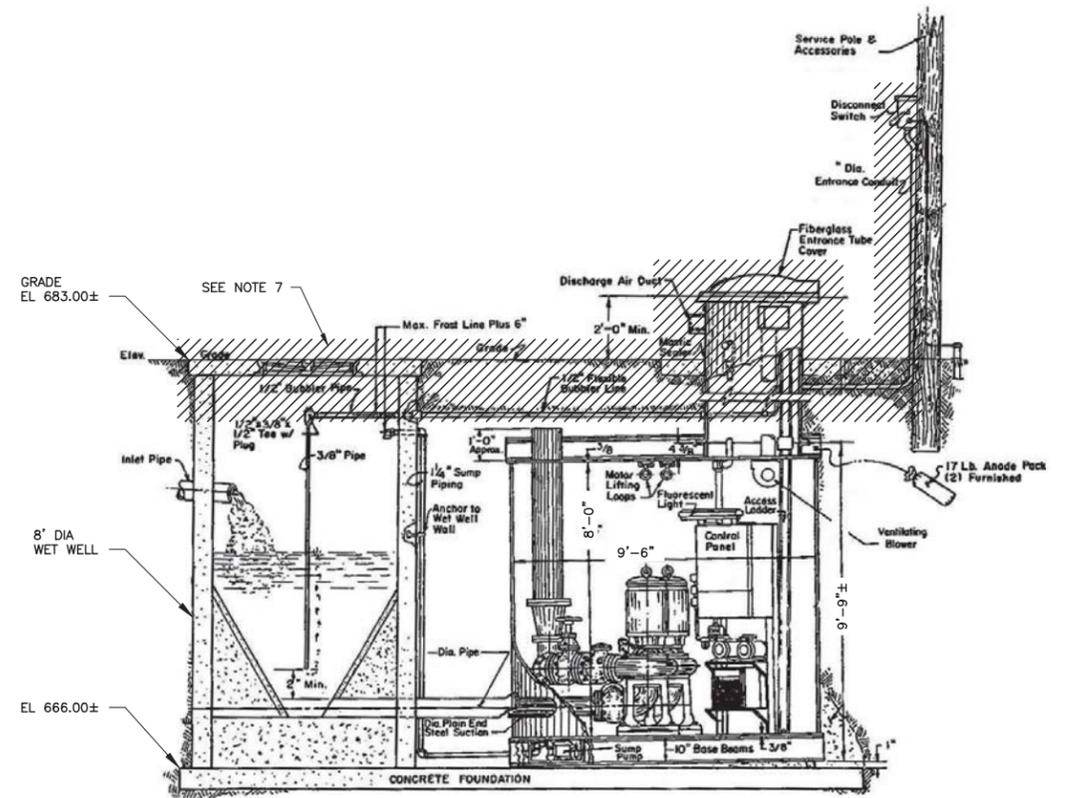
PLAN - FAIRWAY KNOLLS  
LIFT STATION FORCE MAIN DISCHARGE  
SCALE: NOT TO SCALE



PLAN - DEMOLITION  
SCALE: 1"=10'

**LIFT STATION DEMOLITION NOTES:**

- CROSS HATCH INDICATES REMOVAL OF STRUCTURES, PIPING AND EQUIPMENT.
- CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BIDDING PROJECT TO SEE EXTENT OF THE DEMOLITION WORK INVOLVED AND TO INCLUDE THE NECESSARY WORK IN BID.
- DEMOLISH EXISTING LIFT STATION TO 24" BELOW GRADE. FILL LIFT STATION WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH SOIL, COMPACT AND SEED IN GRASSY AREAS. BACKFILL TOP 24" WITH NO. 53 COMPACTED AGGREGATE AND PAVE IN IMPROVED AREAS. VENT STRUCTURES DURING FLOWABLE FILL INSTALLATION TO ENSURE NO VOIDS ARE CREATED.
- ALL ABOVE GROUND ELECTRICAL COMPONENTS, CONDUIT AND WIRING, ANTENNA TOWER, AND SUPPORT STRUCTURES SHALL BE DE-ENERGIZED, DISCONNECTED AND REMOVED.
- ABANDON FORCE MAIN IN PLACE. FILL ENTIRE FORCE MAIN WITH FLOWABLE FILL. COLLECT AND PROPERLY DISPOSE OF SEWAGE THAT IS PUSHED OUT OF THE FORCE MAIN BY THE FLOWABLE FILL. ASSUME 15 CY'S OF FLOWABLE FILL REQUIRED.
- PLUG PUMP SUCTION LINE BETWEEN WET WELL AND LIFT STATION. REMOVE ANCILLARY LIFT STATION PIPING FROM WET WELL. GROUT ANY VOIDS LEFT IN WET WELL WALLS FROM PIPING REMOVAL.
- INSTALL A 5'x5'x12" THICK CLASS D CONCRETE CAP WITH #4 REINFORCING STEEL AT 12" ON CENTER EACH WAY. CONCRETE CAP IS TO BE CENTERED OVER THE LIFT STATION CHIMNEY (MAN WAY ACCESS) WITH THE TOP OF THE SLAB 2' BELOW FINISHED GRADE. INSTALL RX WATERSTOP BETWEEN THE CAP AND LIFT STATION CHIMNEY 3" FROM THE BASE OF THE CAP.



SECTION - DEMOLITION  
SCALE: NOT TO SCALE

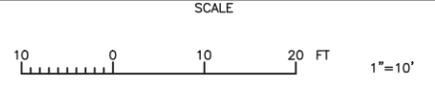
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INDIANAPOLIS, INDIANA 46278

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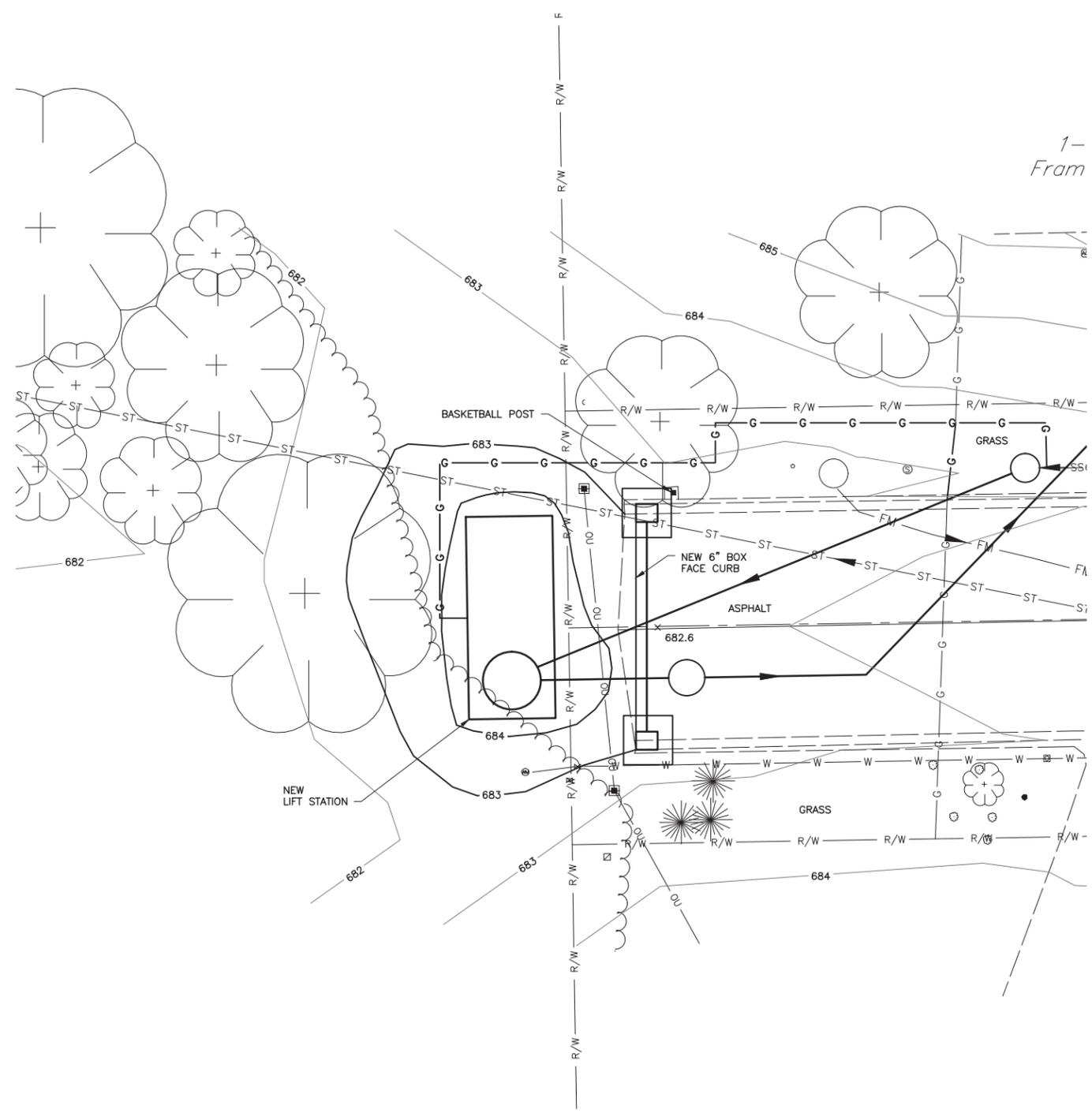
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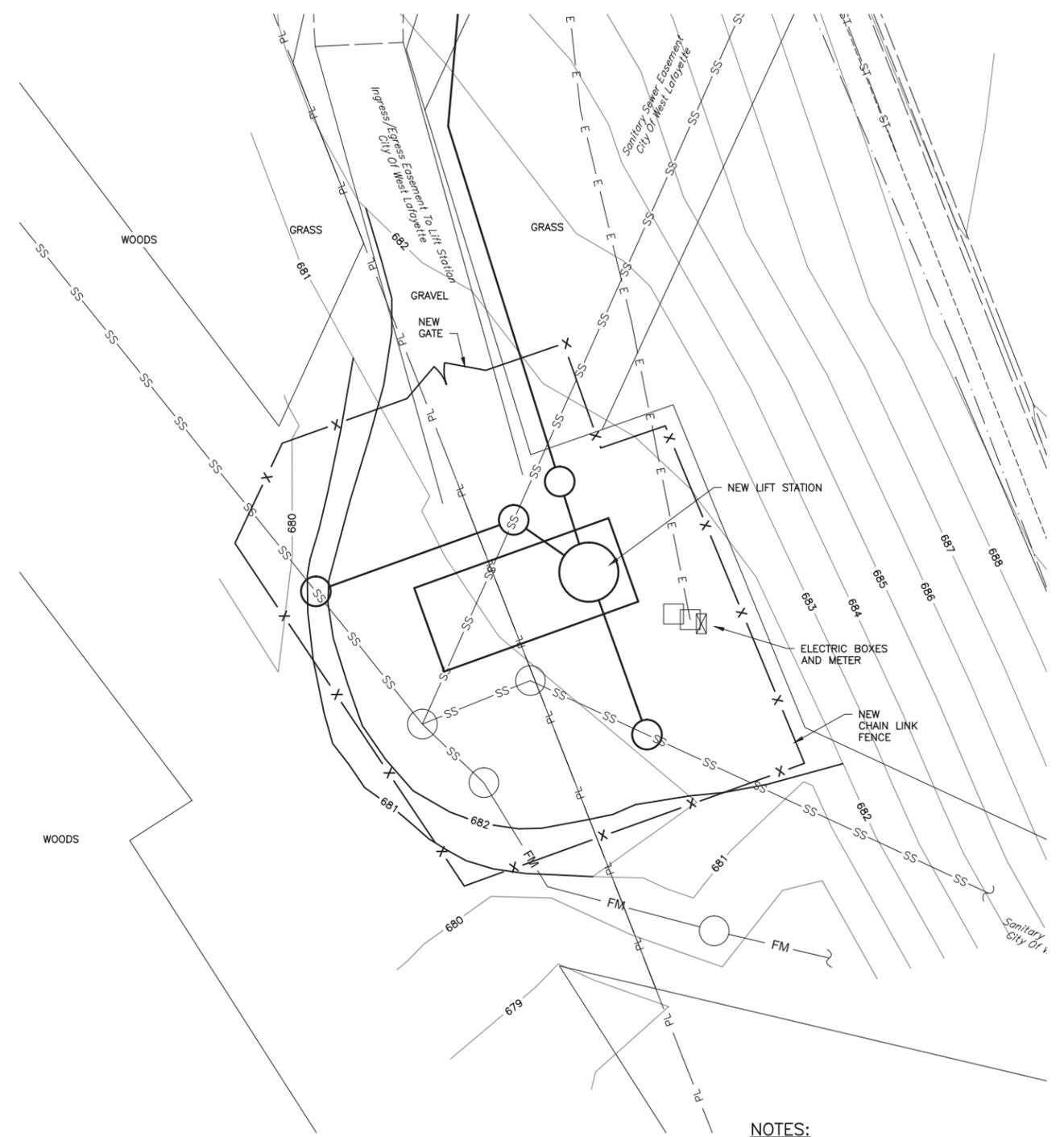
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
DEMOLITION PLAN AND SECTION  
FAIRWAY KNOLLS LIFT STATION

FILE NAME	079110603.DWG
DWG	3
SHEET	3 OF 24
DATE	APRIL 2014
REV	0



PLAN - FAIRWAY KNOLLS



PLAN - SHERATON

- NOTES:**
1. SHERATON - ALL DISTURBED AREAS OUTSIDE OF FENCE AND DRIVE TO BE SEEDED PER SPECIFICATION SECTION 02900. AREAS WITHIN FENCE AND DRIVE TO BE TOPPED WITH A MINIMUM OF 6" COMPACTED NO.53 STONE.
  2. FAIRWAY KNOLLS - AREA BETWEEN NEW CURB AND LIFT STATION IS TO BE A MINIMUM OF 6" OF NO.53 STONE. CURB AND PAVEMENT WORK PER DETAILS. REMAINING DISTURBED AREA TO BE SEEDED PER SPECIFICATION SECTION 02900.

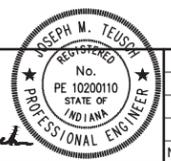
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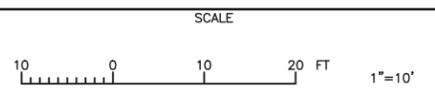
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SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
NEW GRADING PLANS

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SHEET	4 OF 24
DATE	APRIL 2014
REV	0

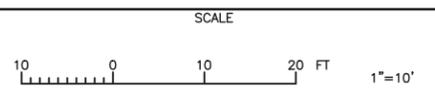
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STRUCTURE DATA TABLE							
MANHOLE NUMBER	TYPE	DIAMETER	APPROX GRADE ELEVATION	INLET SIZE	INVERT ELEVATION	OUTLET SIZE	INVERT ELEVATION
MH-1	DOGHOUSE MANHOLE	60"	682.00	EXST 12" NW	664.00±	NEW 12" E	663.50
MH-2	DOGHOUSE MANHOLE	60"	682.75	NEW 12" W EXST 12" NE	663.32 662.00±	NEW 12" SE	661.50
MH-3	WET WELL	96"	682.75	NEW 12" NW NEW 12" SE NEW 3" NW	661.43 663.26 674.50	NEW 10" NW	676.75
MH-4	DOGHOUSE MANHOLE	60"	682.25	EXST 10" SE	663.91	NEW 12" NW	663.41
MH-5	METER VAULT	60"	682.75	NEW 10" SE	677.00	NEW 10" NW NEW 3" SE	677.00 675.50

- NOTES:**
1. REMOVE EXISTING FENCE AND GATE AND REPLACE WITH NEW CHAIN LINK FENCE AND GATE.
  2. FIELD VERIFY INVERTS OF EXISTING SEWERS AND PROVIDE TO ENGINEER PRIOR TO CONSTRUCTING NEW MH-1, NEW MH-2, NEW MH-3 AND NEW MH-4.
  3. MAINTAIN UNINTERRUPTED DELIVERY ACCESS AT ALL TIMES.
  4. LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
  5. METER VAULT DRAIN LINE NOT SHOWN FOR CLARITY.

PLAN



**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

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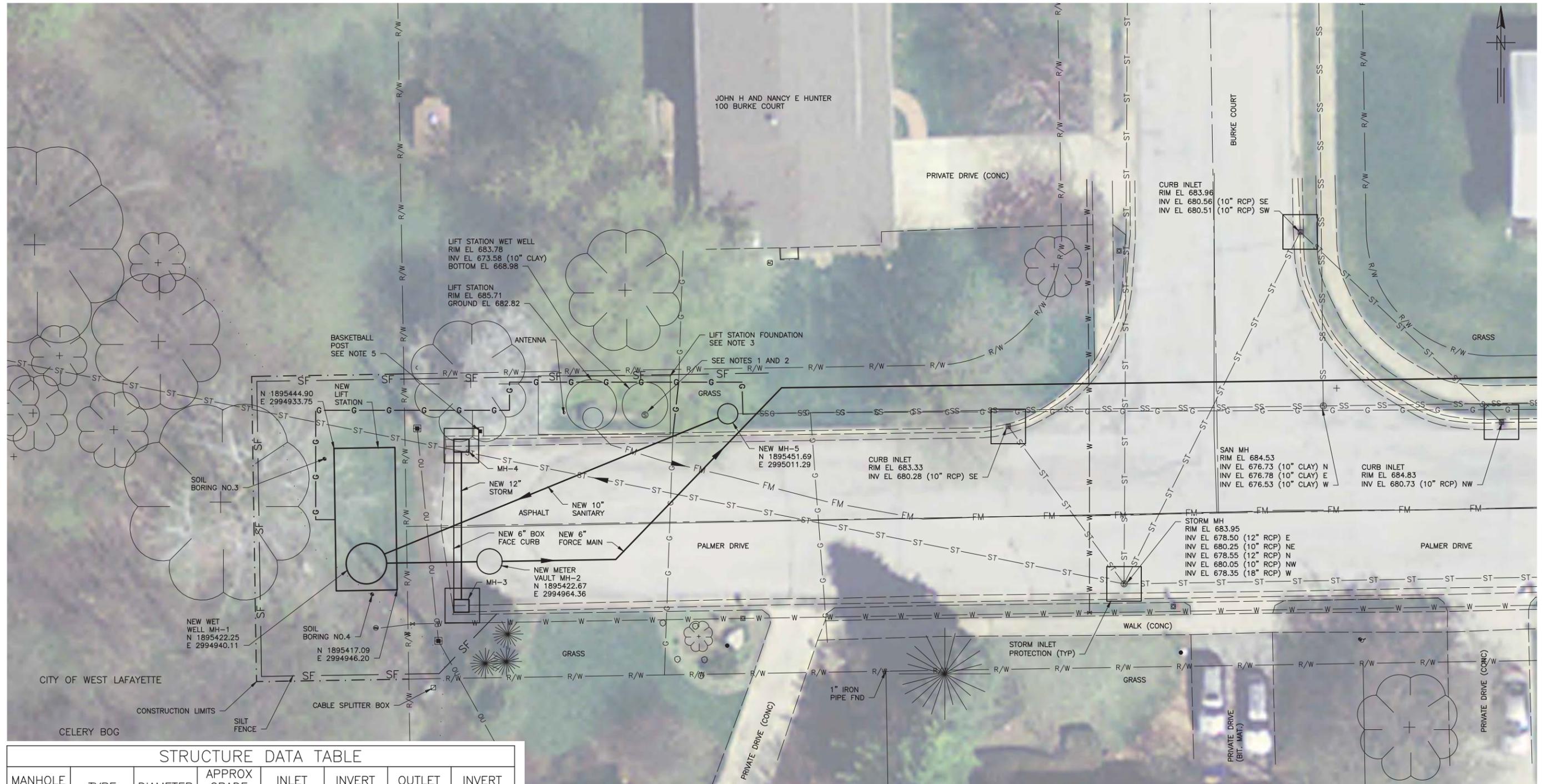
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SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
SITE PLAN  
SHERATON LIFT STATION

FILE NAME	079110605.DWG
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SHEET	5 OF 24
DATE	APRIL 2014
REV	0

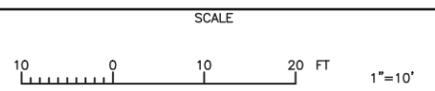
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STRUCTURE DATA TABLE							
MANHOLE NUMBER	TYPE	DIAMETER	APPROX GRADE ELEVATION	INLET SIZE	INVERT ELEVATION	OUTLET SIZE	INVERT ELEVATION
MH-1	WET WELL	96"	684.00	NEW 10" NE NEW 3" E	673.28 673.00	NEW 6" E	674.86
MH-2	METER VAULT	60"	684.00	NEW 6" NEW 3" W	675.00 673.50	NEW 6" E	675.00
MH-3	CURB INLET	PER DETAIL	682.50	NEW 4" W	677.69	NEW 12" N	677.44
MH-4	CURB INLET	PER DETAIL	682.50	NEW 12" S EXISTING 18" E	677.15 676.67	EXISTING 18" W	676.67
MH-5	DOGHOUSE MANHOLE	48"	683.50	EXISTING 10" E	673.98	NEW 10" SW	673.48

- NOTES:**
- ONCE LIFT STATION IS DEMOLISHED, ESTABLISH NEW FLOW LINES IN WET WELL.
  - FIELD VERIFY INVERT OF EXISTING 10" SEWER AND PROVIDE TO ENGINEER PRIOR TO CORE DRILLING CONNECTION FOR NEW 10" SEWER.
  - LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
  - REPLACE ROAD WAY WITH NEW ASPHALT PAVEMENT PER DETAILS.
  - PROTECT BASKETBALL POST. REMOVE AND REINSTALL IF NECESSARY.

PLAN



**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jansch*

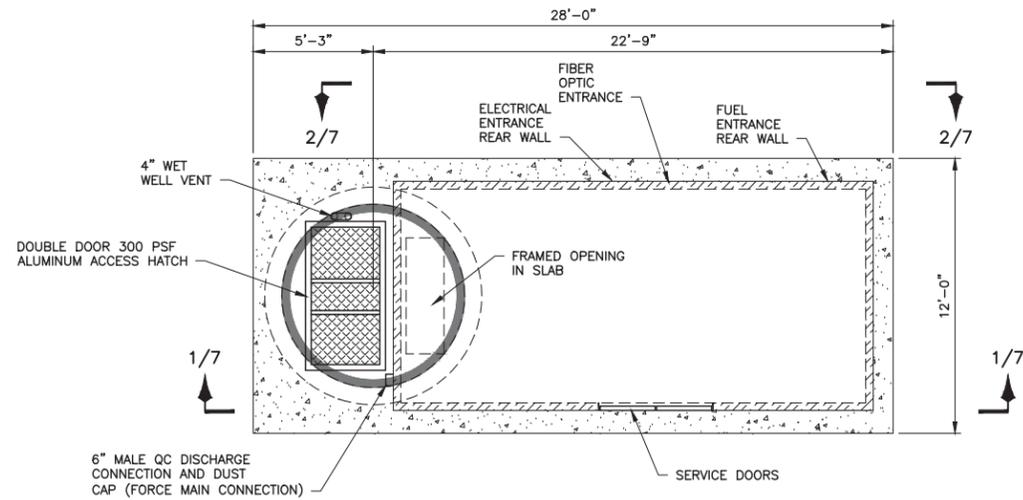


NO.	DATE	APPD	REVISION

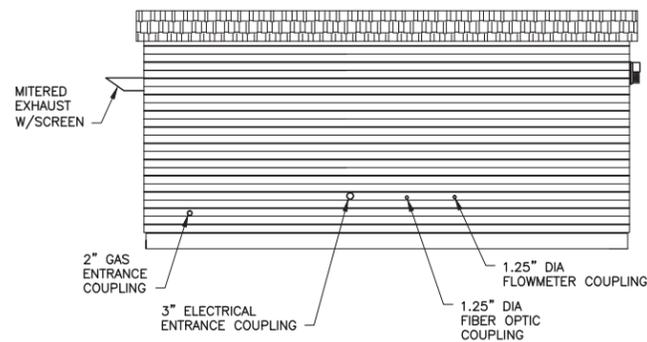
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
SITE PLAN  
FAIRWAY KNOLLS LIFT STATION

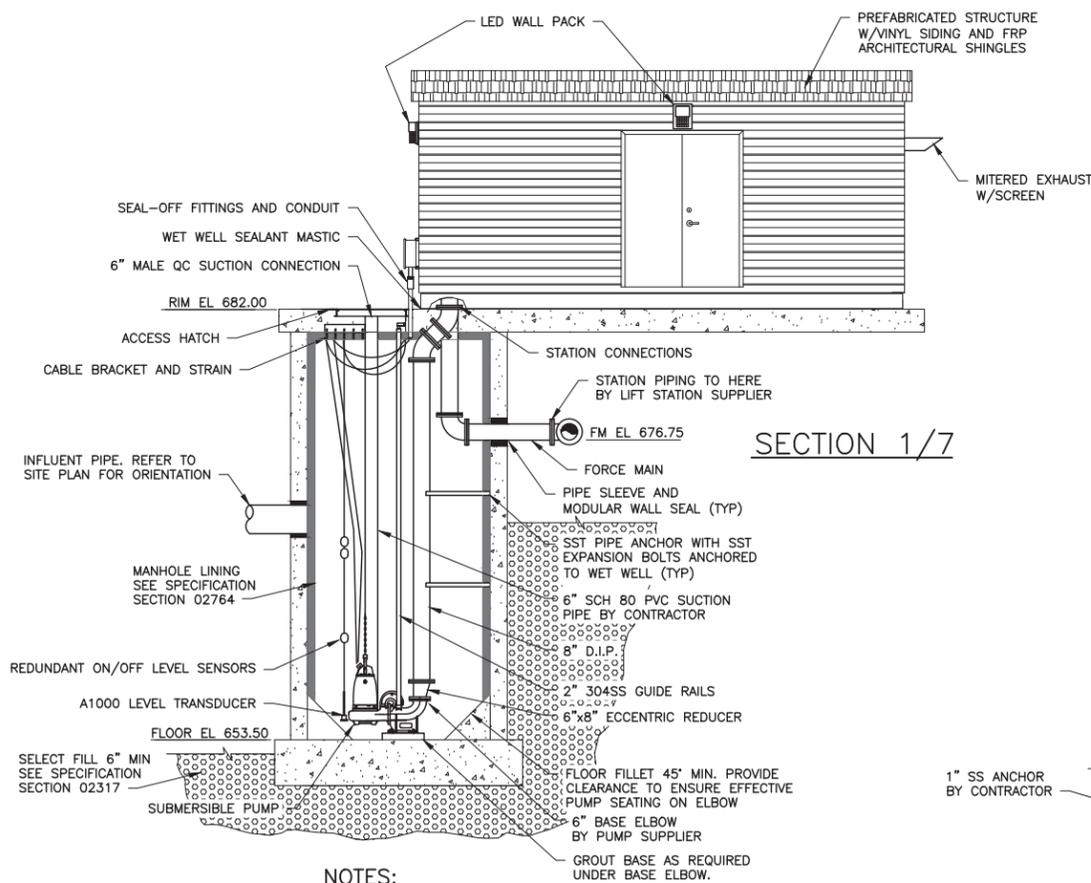
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SHEET	6 OF 24
DATE	APRIL 2014
REV	0



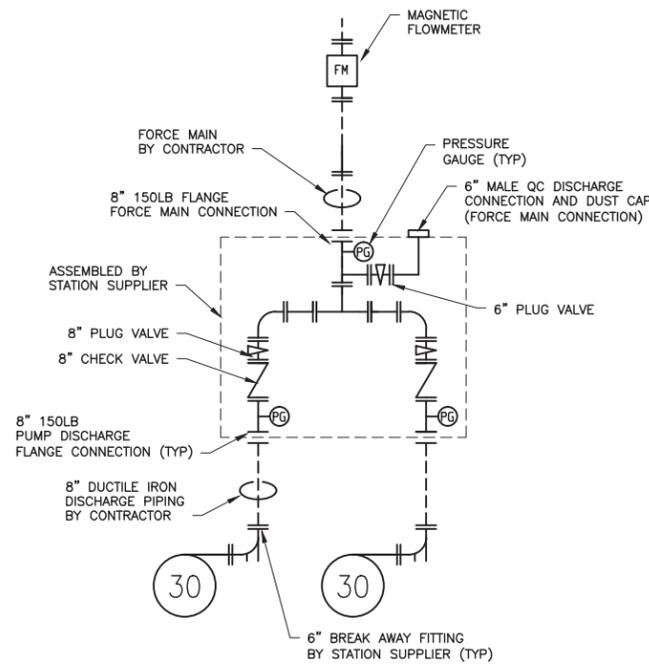
PLAN VIEW



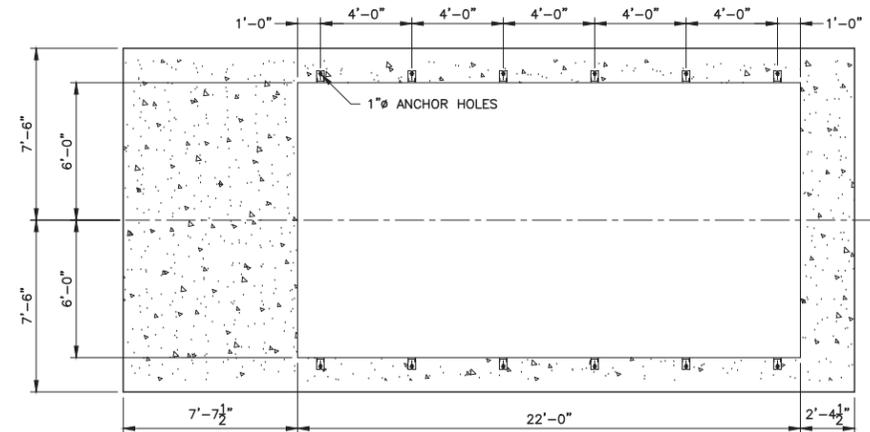
VIEW 2/7



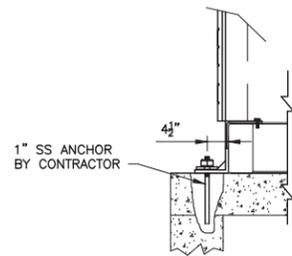
SECTION 1/7



PIPING SCHEMATIC



PLAN VIEW - STATION PLACEMENT



ANCHOR DETAIL

ELECTRICAL SERVICE		NATURAL GAS SERVICE	
AMPERAGE	200	LINE PRESSURE (lbs./sq.in.)	5
VOLTAGE	277/480	OPERATING PRESSURE (in. w.c.)	7-14" W.C.
PHASE	3	OPERATING VOLUME (cu.ft./hr.)	945
WIRE	3	NOTE: INSTALLING CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING FUEL REQUIREMENTS WITH GAS UTILITY. 5 LB. MIN. GAS SERVICE REQUIRED. MANUFACTURER TO SUPPLY SECONDARY REGULATOR FOR CONTRACTOR MOUNTING AFTER GAS METER.	
CYCLE	60		

SITE UTILITY REQUIREMENTS

NOTES:

1. WET WELL MANUFACTURER WILL GIVE WRITTEN CONFIRMATION THAT EACH REINFORCED PRECAST CONCRETE WET WELL SECTION CONTAINS THE SPECIFIED WATERPROOFING ADMIXTURE.
2. SEE SPECIFICATIONS FOR OPERATING LEVELS.

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\079110G07 1:1 04/16/14 12:23 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED WSP  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014



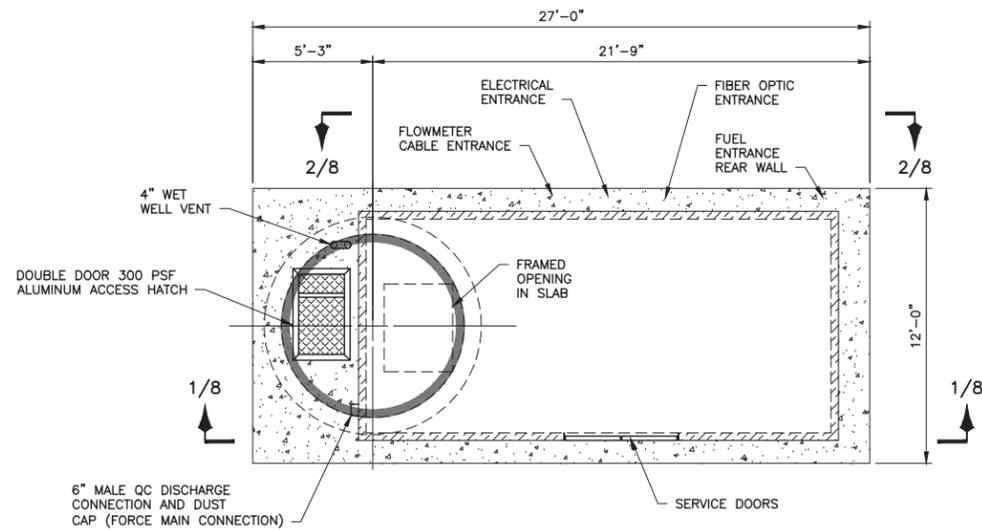
NO.	DATE	APPD	REVISION

SCALE  
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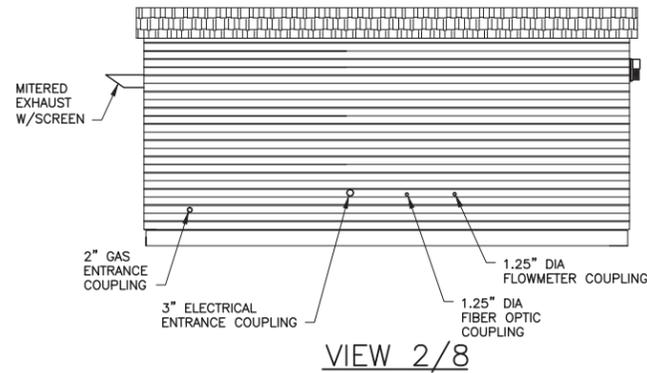
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
NEW LIFT STATION  
SHERATON

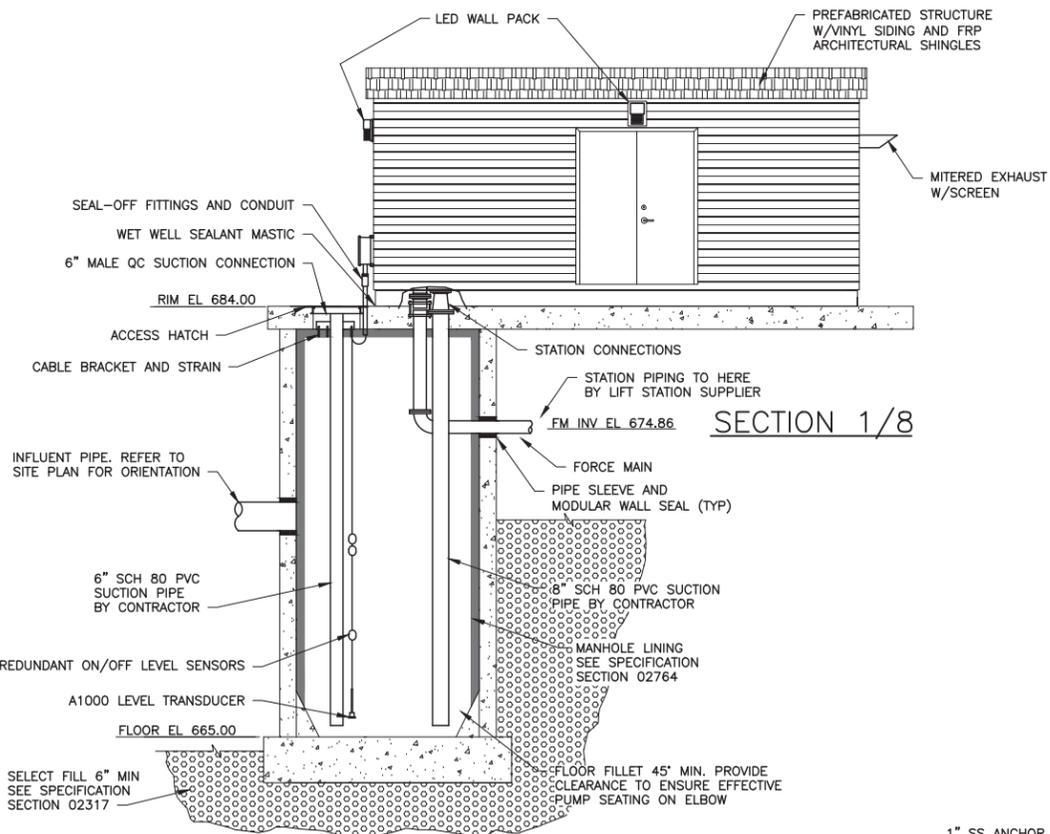
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DWG	7
SHEET	7 OF 24
DATE	APRIL 2014
REV	0



PLAN VIEW



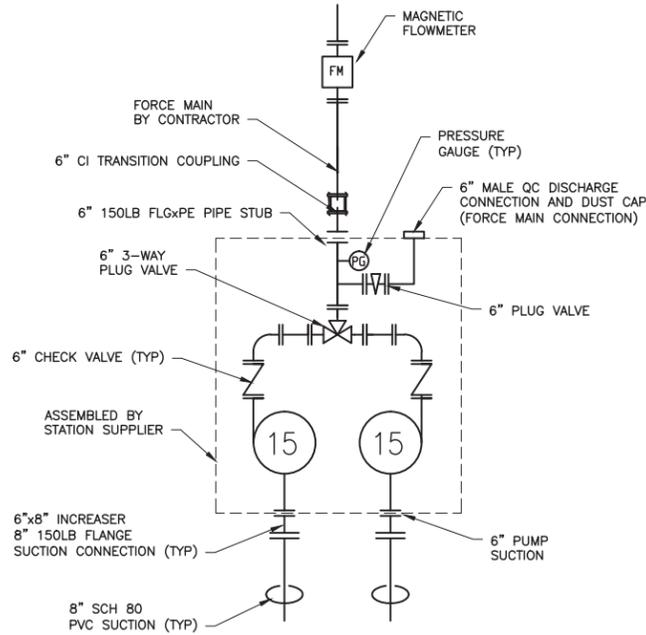
VIEW 2/8



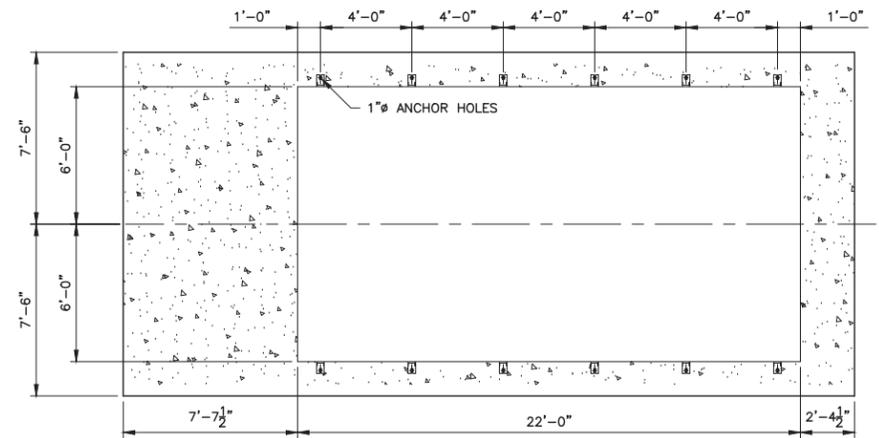
SECTION 1/8

NOTES:

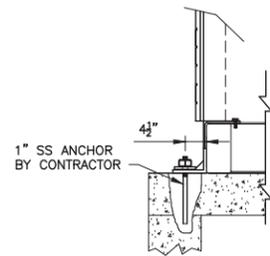
1. WET WELL MANUFACTURER WILL GIVE WRITTEN CONFIRMATION THAT EACH REINFORCED PRECAST CONCRETE WET WELL SECTION CONTAINS THE SPECIFIED WATERPROOFING ADMIXTURE.
2. SEE SPECIFICATIONS FOR OPERATING LEVELS.
3. SEE DRAWINGS 19 AND 20 FOR SLAB REQUIREMENTS.



PIPING SCHEMATIC



PLAN VIEW - STATION PLACEMENT



ANCHOR DETAIL

ELECTRICAL SERVICE		NATURAL GAS SERVICE	
AMPERAGE	200	LINE PRESSURE (lbs./sq.in.)	5
VOLTAGE	277/480	OPERATING PRESSURE (in. w.c.)	7-14" W.C.
PHASE	3	OPERATING VOLUME (cu.ft./hr.)	861
WIRE	3	NOTE: INSTALLING CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING FUEL REQUIREMENTS WITH GAS UTILITY.	
CYCLE	60	5 LB. MIN. GAS SERVICE REQUIRED. MANUFACTURER TO SUPPLY SECONDARY REGULATOR FOR CONTRACTOR MOUNTING AFTER GAS METER.	

SITE UTILITY REQUIREMENTS

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**Greeley and Hansen**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014



NO.	DATE	APPD	REVISION

SCALE

NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA

SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL

NEW LIFT STATION  
FAIRWAY KNOLLS

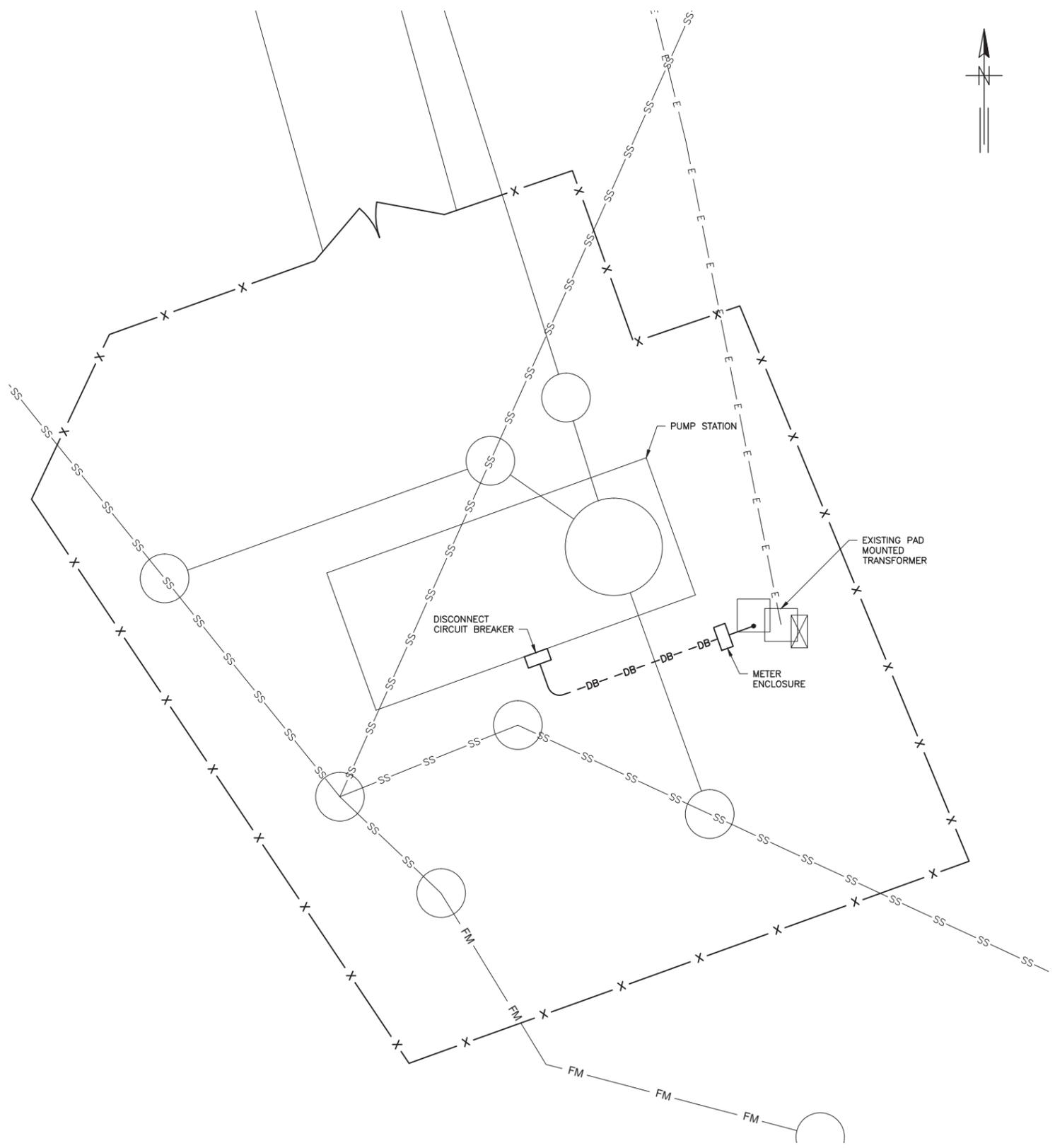
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DWG 8

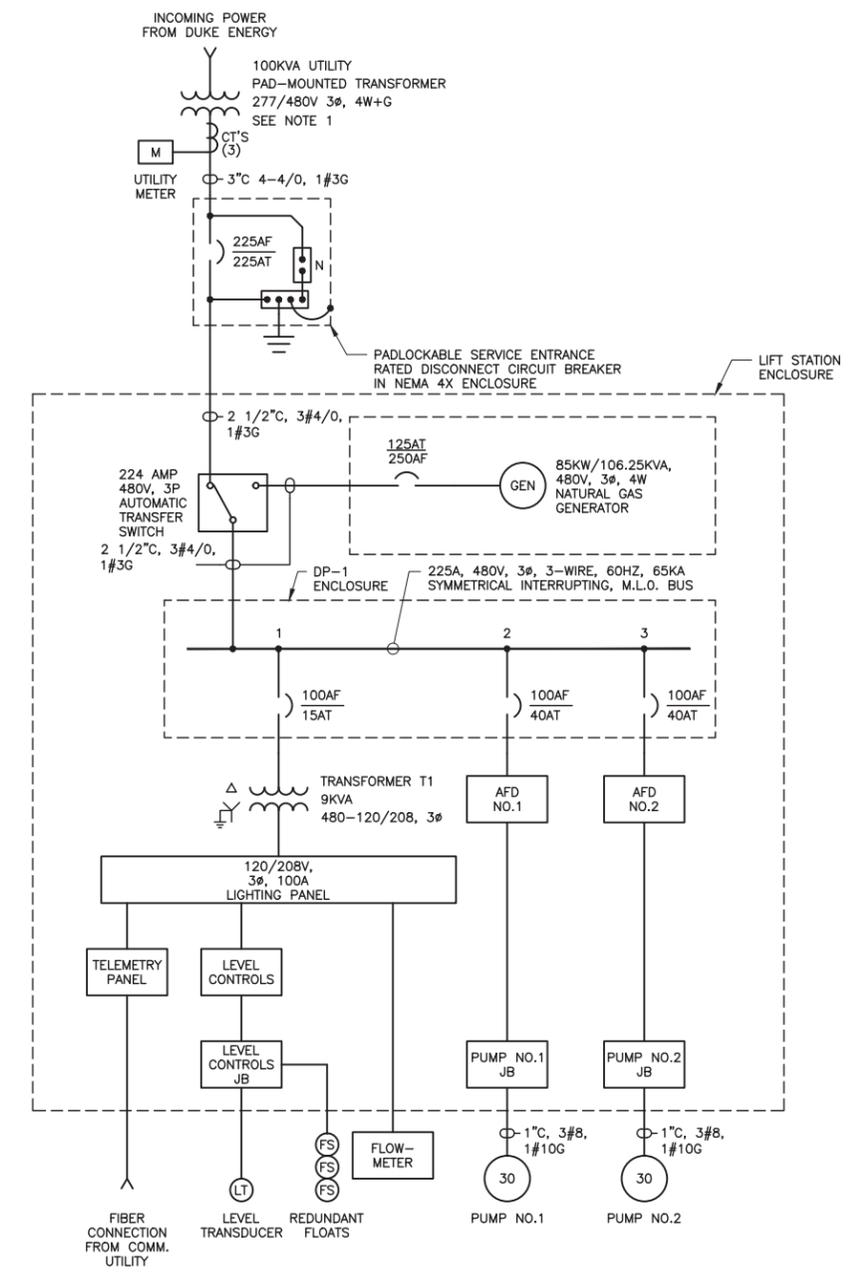
SHEET 8 OF 24

DATE APRIL 2014 REV 0

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\079110E09 1:1 04/16/14 13:42 GH-H



**SITE PLAN**  
SCALE: 3/16"=1'-0"



**OVERALL ONE LINE DIAGRAM**  
NOT TO SCALE

**NOTE:**  
1. PROVIDE NEW SERVICE TO PUMP STATION. COORDINATE ALL NEW WORK WITH ELECTRIC UTILITY.

**Greeley and Hansen**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED JK  
DRAWN TT  
CHECKED NV

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jausch*



NO.	DATE	APPD	REVISION

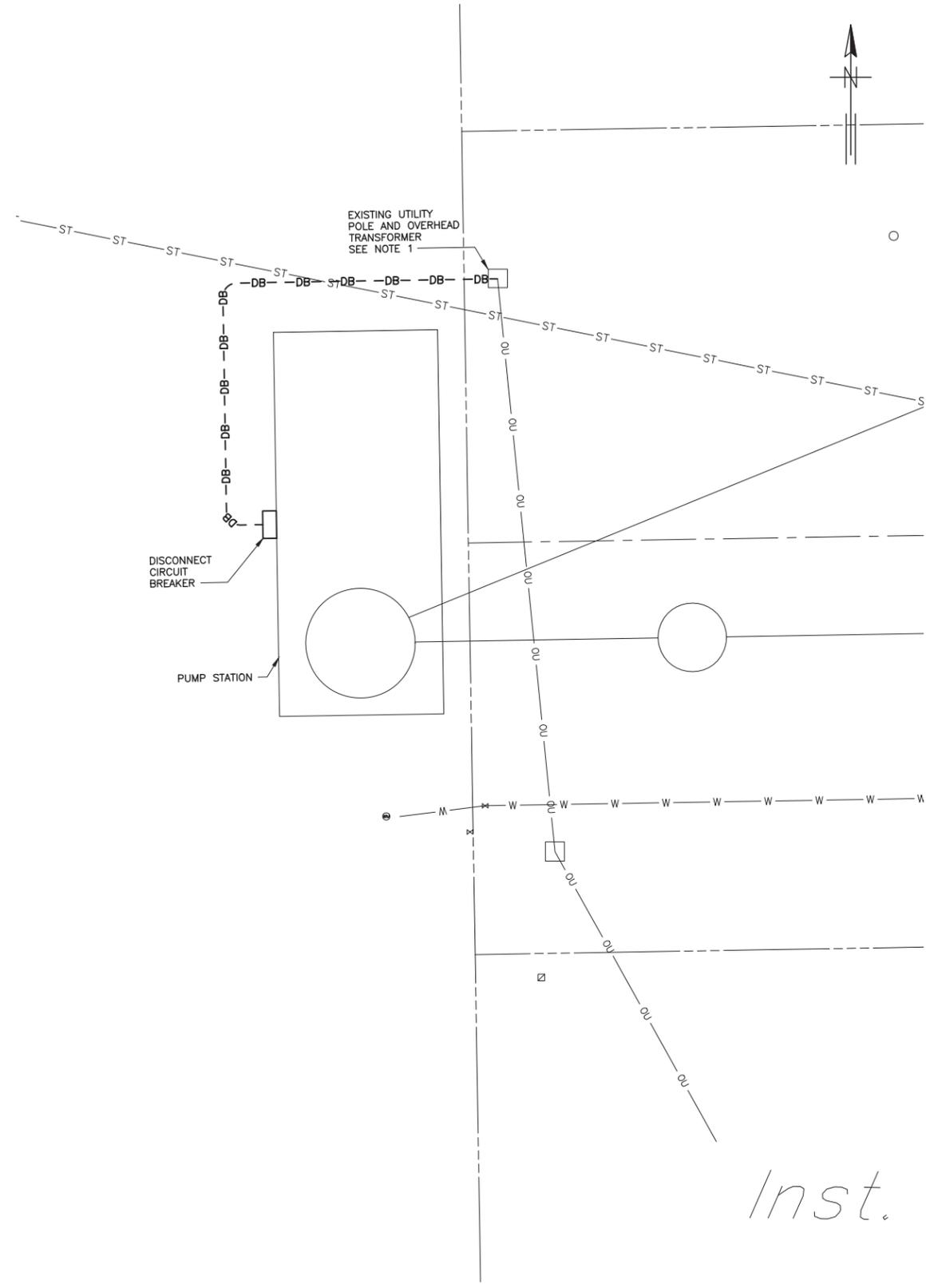


CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

ELECTRICAL  
LIFT STATION  
ONE LINE DIAGRAM AND PLAN  
SHERATON

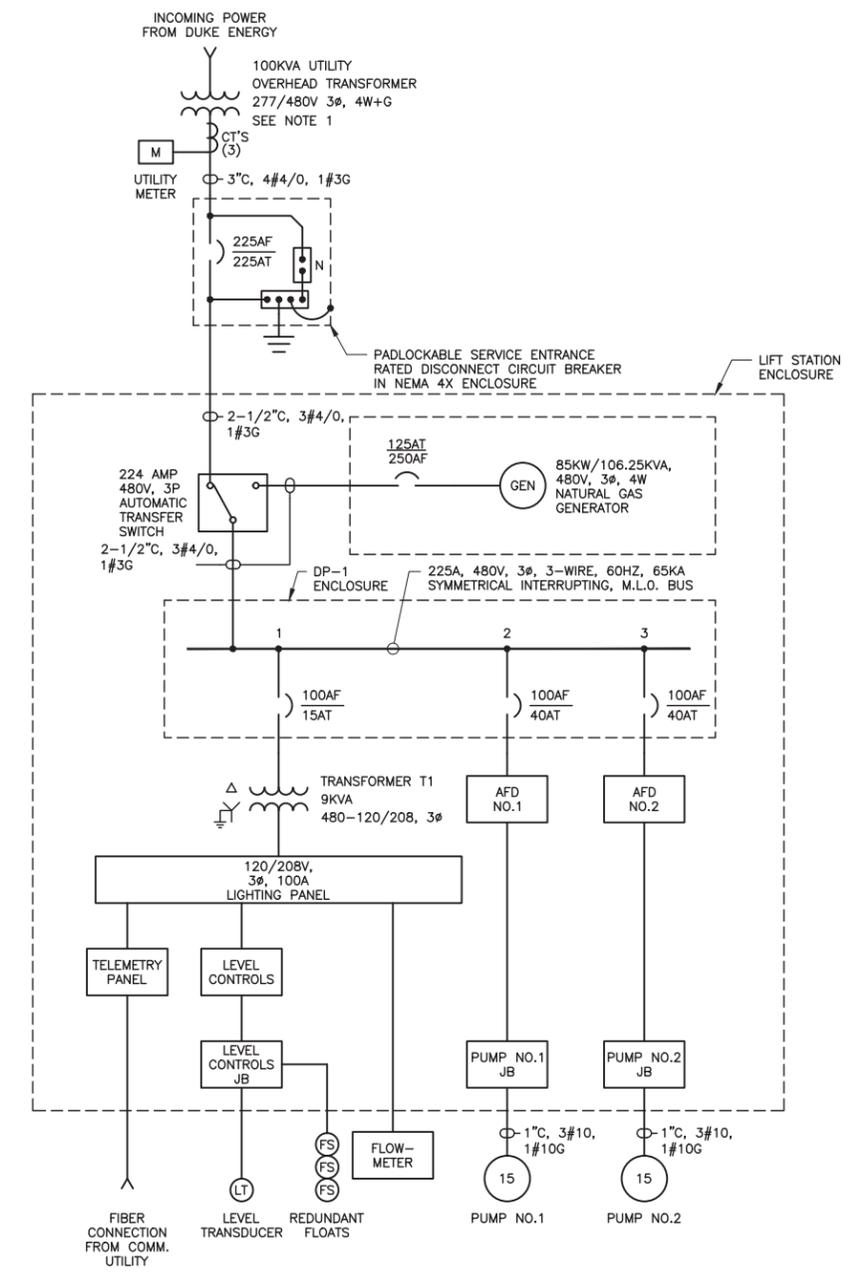
FILE NAME	079110E09.DWG
DWG	9
SHEET	9 OF 24
DATE	APRIL 2014
REV	0

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\079110E10 1:1 04/16/14 13:41 GH-H



*Inst.*

**SITE PLAN**  
SCALE: 3/16"=1'-0"



**OVERALL ONE LINE DIAGRAM**  
NOT TO SCALE

**NOTE:**  
1. INSTALL NEW METER ENCLOSURE AND ROUTE CONDUIT TO PUMP STATION. COORDINATE ALL NEW WORK WITH ELECTRICAL UTILITY.

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

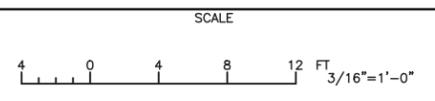
DESIGNED JK  
DRAWN TT  
CHECKED NV

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jansch*



NO.	DATE	APPD	REVISION

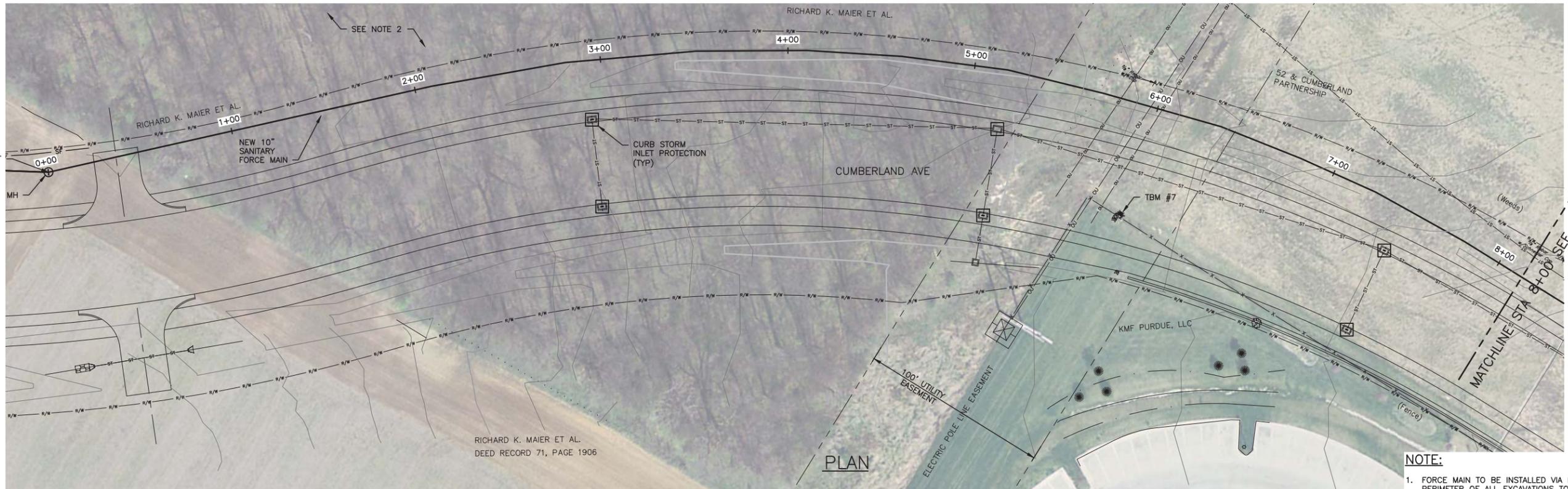


CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

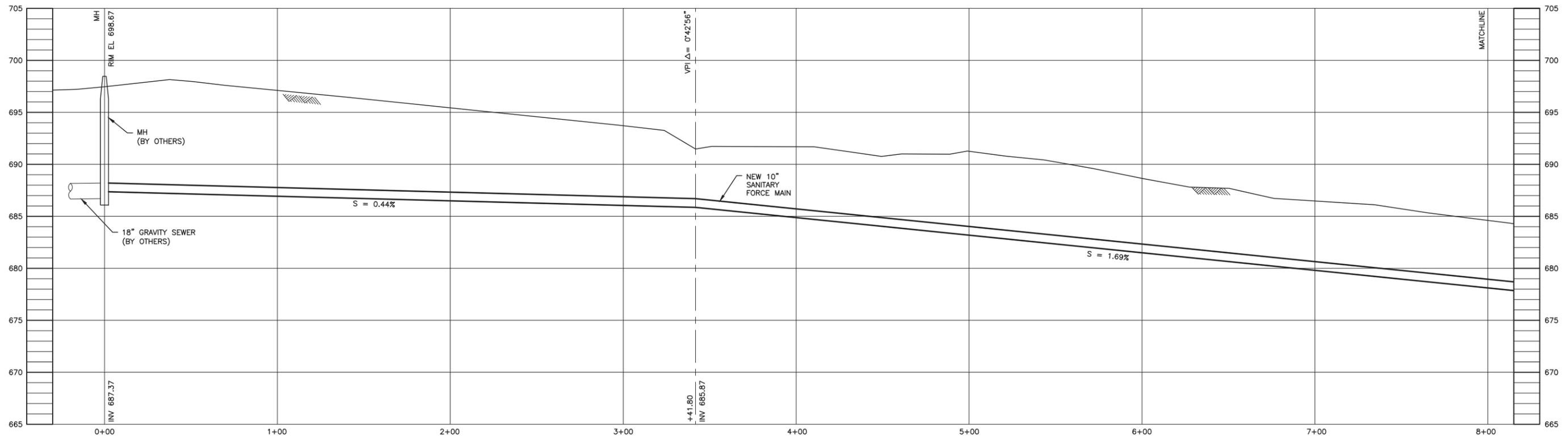
ELECTRICAL  
LIFT STATION  
ONE LINE DIAGRAM AND PLAN  
FAIRWAY KNOLLS

FILE NAME	079110E10.DWG
DWG	10
SHEET	10 OF 24
DATE	APRIL 2014
REV	0

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\2.105 Working Dwg\0791H0G11-15.1:1 04/16/14 10:56 GH-H



- NOTE:**
- FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
  - AERIAL DOES NOT REFLECT CURRENT CONDITIONS. WOODS HAVE BEEN CLEARED WITHIN RIGHT OF WAY.



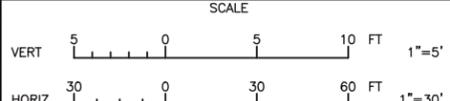
PROFILE

**GREELEY AND HANSEN**  
 7820 INNOVATION BOULEVARD, SUITE 150  
 INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
 DRAWN MJR  
 CHECKED JMT



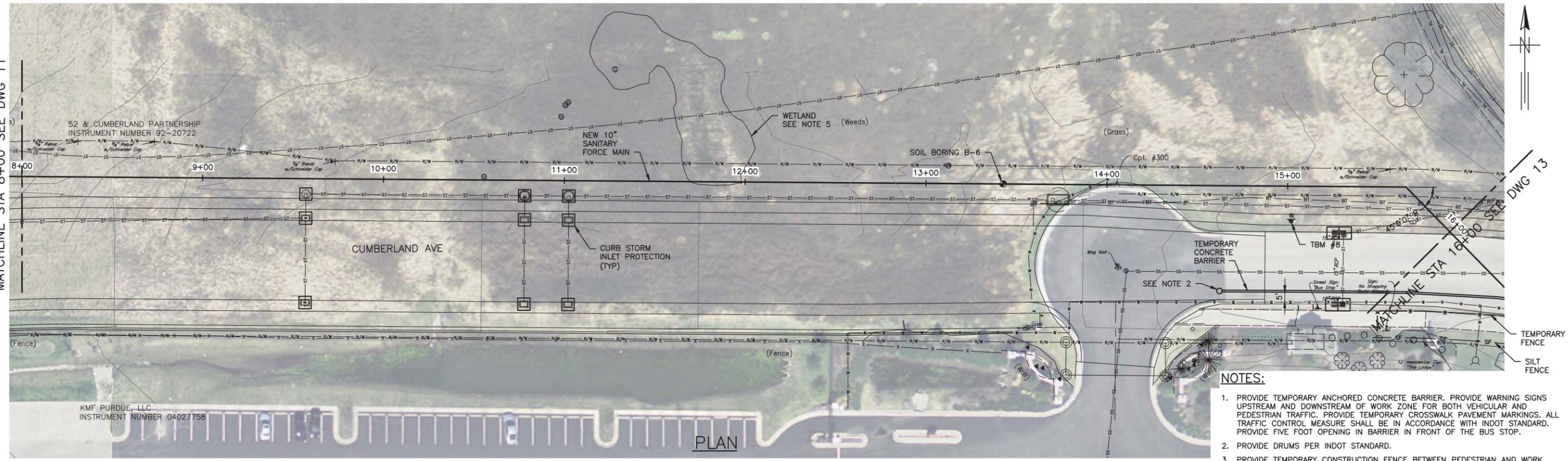
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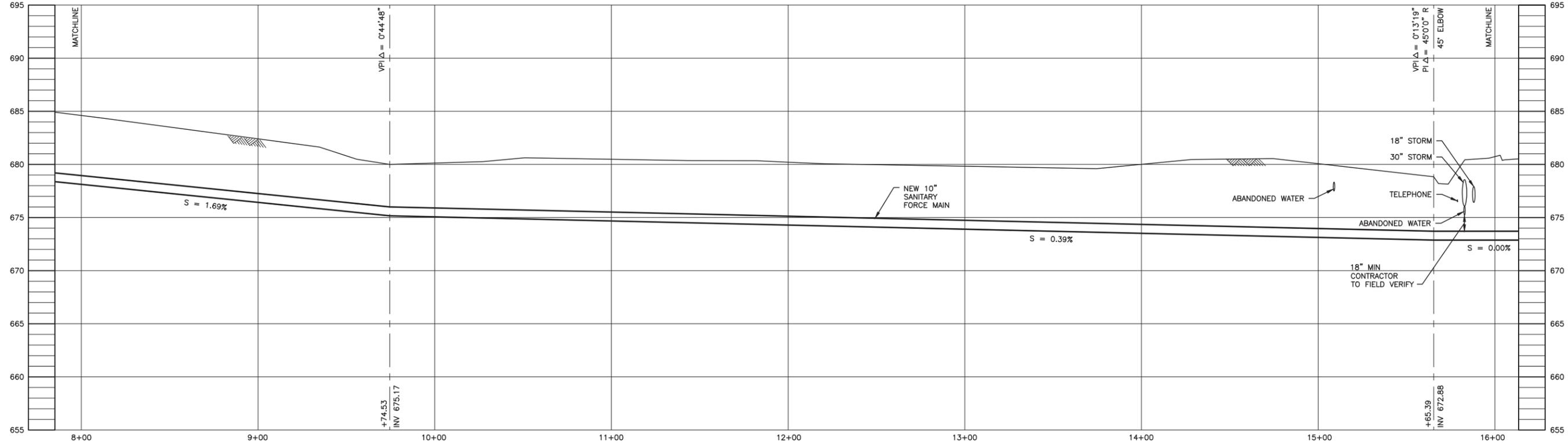
CITY OF WEST LAFAYETTE, INDIANA  
 SHERATON AND FAIRWAY KNOLLS  
 LIFT STATION IMPROVEMENTS

GENERAL  
 PLAN AND PROFILE  
 FORCE MAIN  
 STA 0+00 TO STA 8+00

FILE NAME	0791H0G11-15.DWG		
DWG	11		
SHEET	11	OF	24
DATE	APRIL 2014	REV	0



- NOTES:**
1. PROVIDE TEMPORARY ANCHORED CONCRETE BARRIER. PROVIDE WARNING SIGNS UPSTREAM AND DOWNSTREAM OF WORK ZONE FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC. PROVIDE TEMPORARY CROSSWALK PAVEMENT MARKINGS. ALL TRAFFIC CONTROL MEASURE SHALL BE IN ACCORDANCE WITH INDOT STANDARD. PROVIDE FIVE FOOT OPENING IN BARRIER IN FRONT OF THE BUS STOP.
  2. PROVIDE DRUMS PER INDOT STANDARD.
  3. PROVIDE TEMPORARY CONSTRUCTION FENCE BETWEEN PEDESTRIAN AND WORK ZONE ON PATH.
  4. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
  5. WETLAND NOT TO BE DISTURBED DURING CONSTRUCTION OF FORCE MAIN.



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\2.105 Working Dwg\0791H0G11-15 1:1 04/16/14 10:55 GH-H

**GREELEY AND HANSEN**  
 7820 INNOVATION BOULEVARD, SUITE 150  
 INDIANAPOLIS, INDIANA 46278

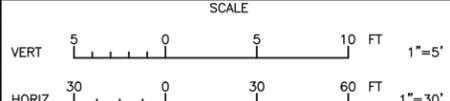
DESIGNED TSH  
 DRAWN MJR  
 CHECKED JMT

APPROVED  
 SEAL AFFIXED  
 APRIL 16, 2014

*Joseph Jansch*



NO.	DATE	APPD	REVISION

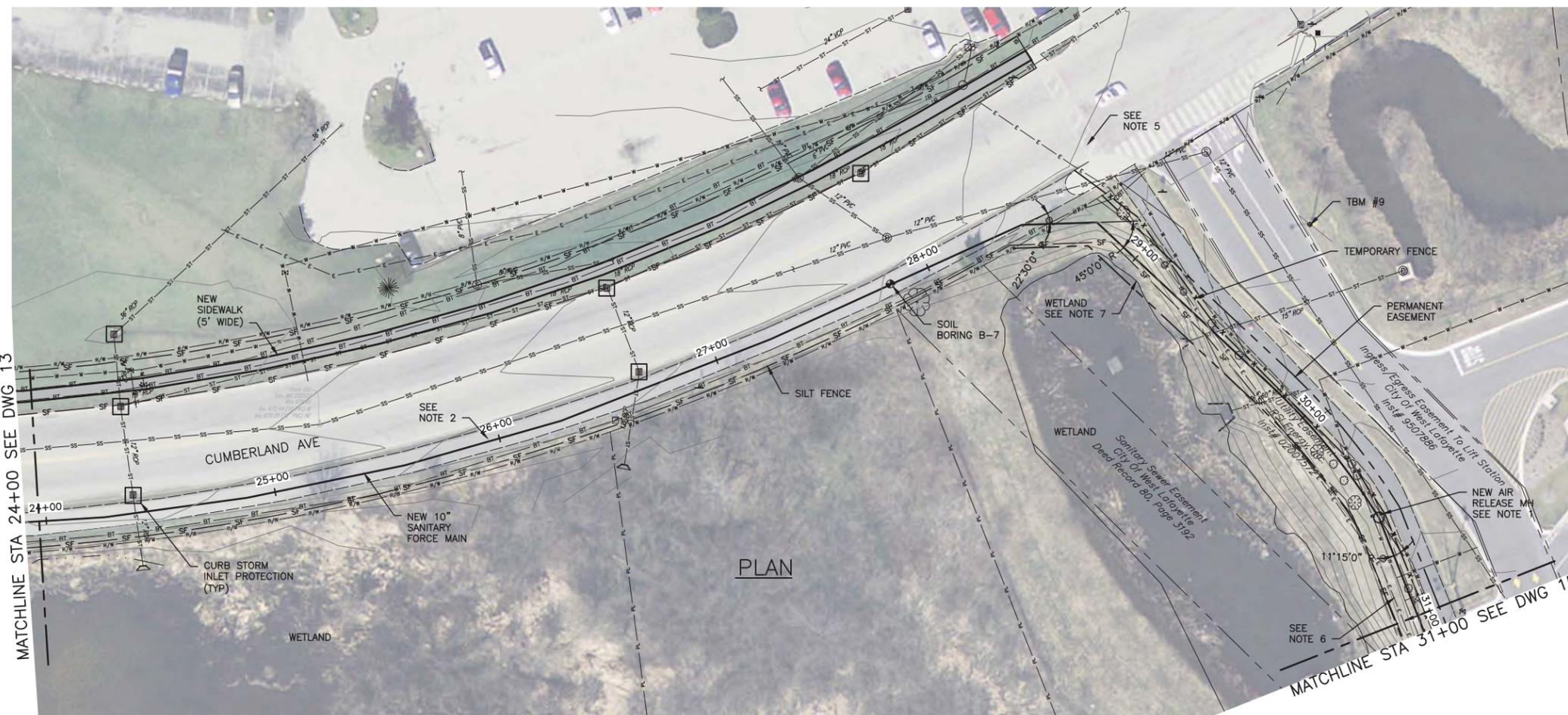


CITY OF WEST LAFAYETTE, INDIANA  
 SHERATON AND FAIRWAY KNOLLS  
 LIFT STATION IMPROVEMENTS

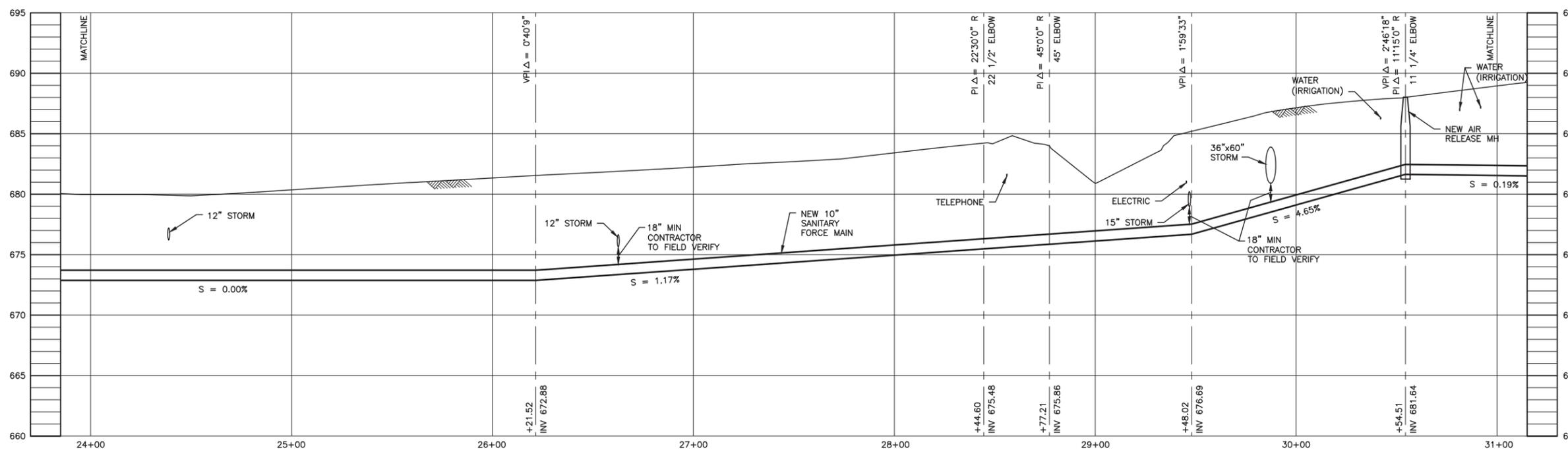
GENERAL  
 PLAN AND PROFILE  
 FORCE MAIN  
 STA 8+00 TO STA 16+00

FILE NAME	0791H0G11-15.DWG
DWG	12
SHEET	12 OF 24
DATE	APRIL 2014
REV	0





- NOTES:**
1. RELOCATE IRRIGATION SYSTEM PIPING AS REQUIRED TO INSTALL MANHOLE. COORDINATE WITH SYSTEM OWNER.
  2. REPAIR HMA PATH WHERE DIRECTED BY OWNER. ONCE IDENTIFIED PATH SECTIONS HAVE BEEN REPAIRED PERFORM PATH RESTORATION PER DETAIL.
  3. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
  4. PROVIDE TEMPORARY CONSTRUCTION FENCE BETWEEN WORK ZONE AND PATH.
  5. EXISTING CROSSWALK TO BE USED IN PEDESTRIAN DETOUR (SEE SPECIFICATION SECTION 01110).
  6. UNDERGROUND ELECTRIC CABLE IS THE MAIN FEED TO WAL-MART AND CANNOT BE DE-ENERGIZED AS IT IS A RADIAL FEED. POT-HOLE CROSSING LOCATIONS PRIOR TO PERFORMING THE WORK.
  7. WETLAND NOT TO BE DISTURBED DURING FORCE MAIN CONSTRUCTION.



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\0791H0G11-15 1:1 04/16/14 10:53 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

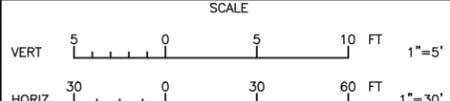
DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jansch*



NO.	DATE	APPD	REVISION

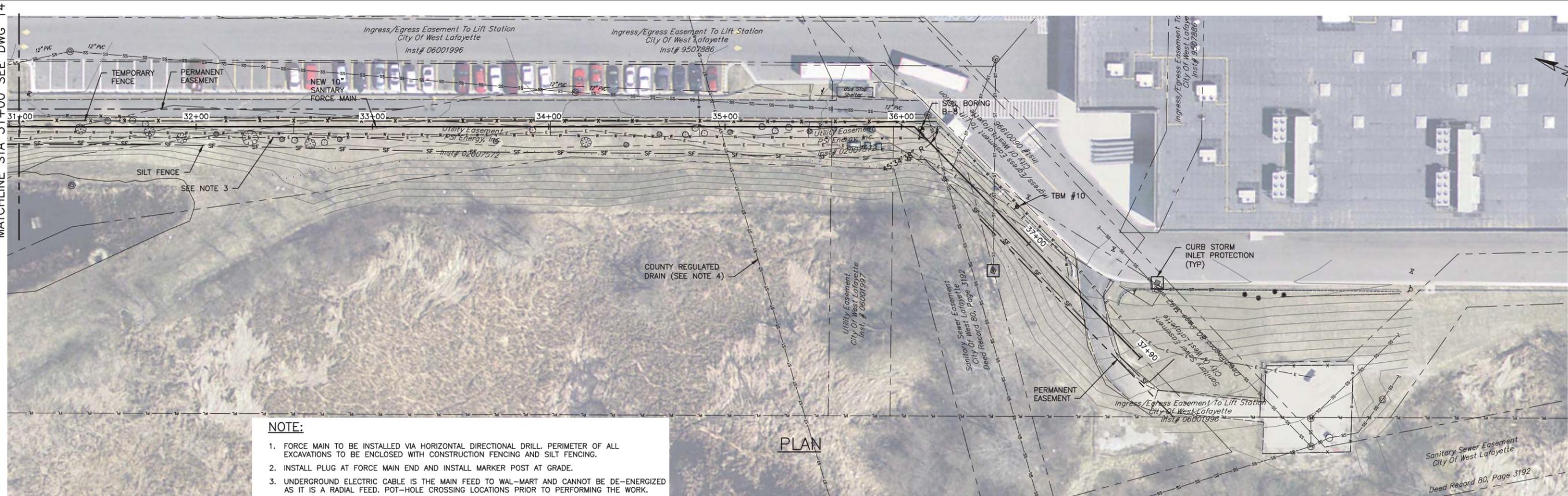


CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
PLAN AND PROFILE  
FORCE MAIN  
STA 24+00 TO STA 31+00

FILE NAME	0791H0G11-15.DWG
DWG	14
SHEET	14 OF 24
DATE	APRIL 2014
REV	0

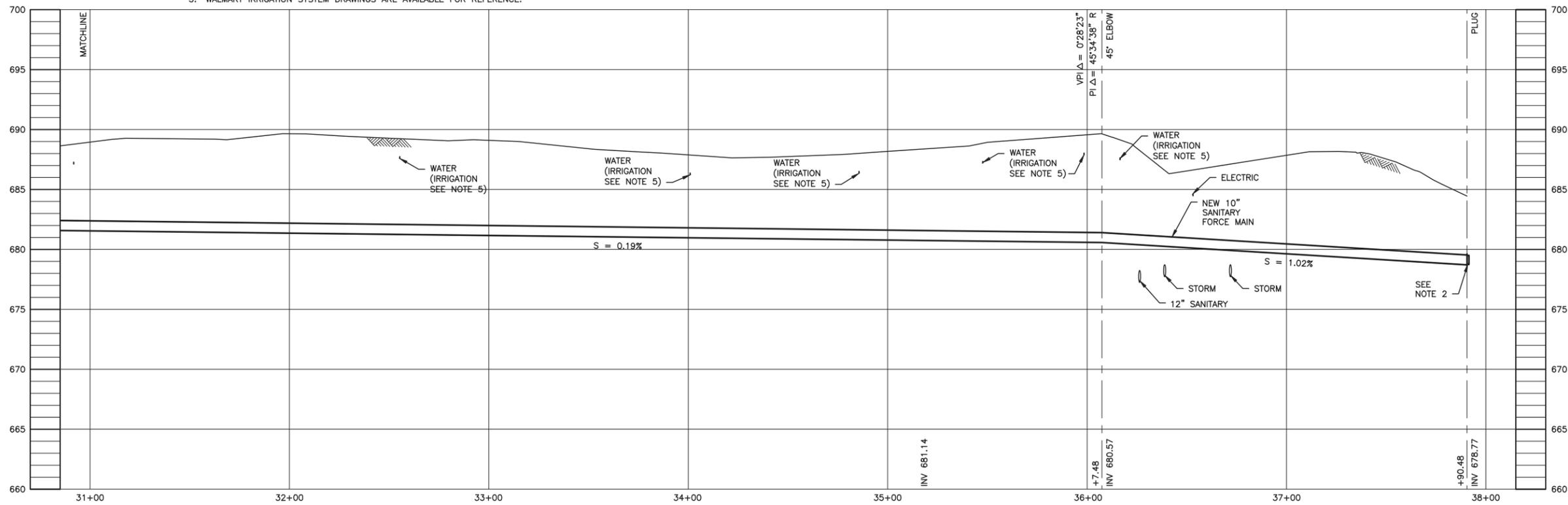
MATCHLINE STA 31+00 SEE DWG 14



**NOTE:**

1. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
2. INSTALL PLUG AT FORCE MAIN END AND INSTALL MARKER POST AT GRADE.
3. UNDERGROUND ELECTRIC CABLE IS THE MAIN FEED TO WAL-MART AND CANNOT BE DE-ENERGIZED AS IT IS A RADIAL FEED. POT-HOLE CROSSING LOCATIONS PRIOR TO PERFORMING THE WORK.
4. POT-HOLE ALL NON-IRRIGATION UTILITY CROSSINGS PRIOR TO PERFORMING THE WORK. MAINTAIN 18" CLEARANCE FROM UTILITIES.
5. WALMART IRRIGATION SYSTEM DRAWINGS ARE AVAILABLE FOR REFERENCE.

PLAN



PROFILE

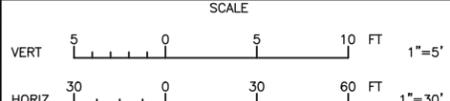
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**GREELEY AND HANSEN**  
 7820 INNOVATION BOULEVARD, SUITE 150  
 INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
 DRAWN MJR  
 CHECKED JMT  
 APPROVED SEAL AFFIXED APRIL 16, 2014  
*Joseph Jansch*



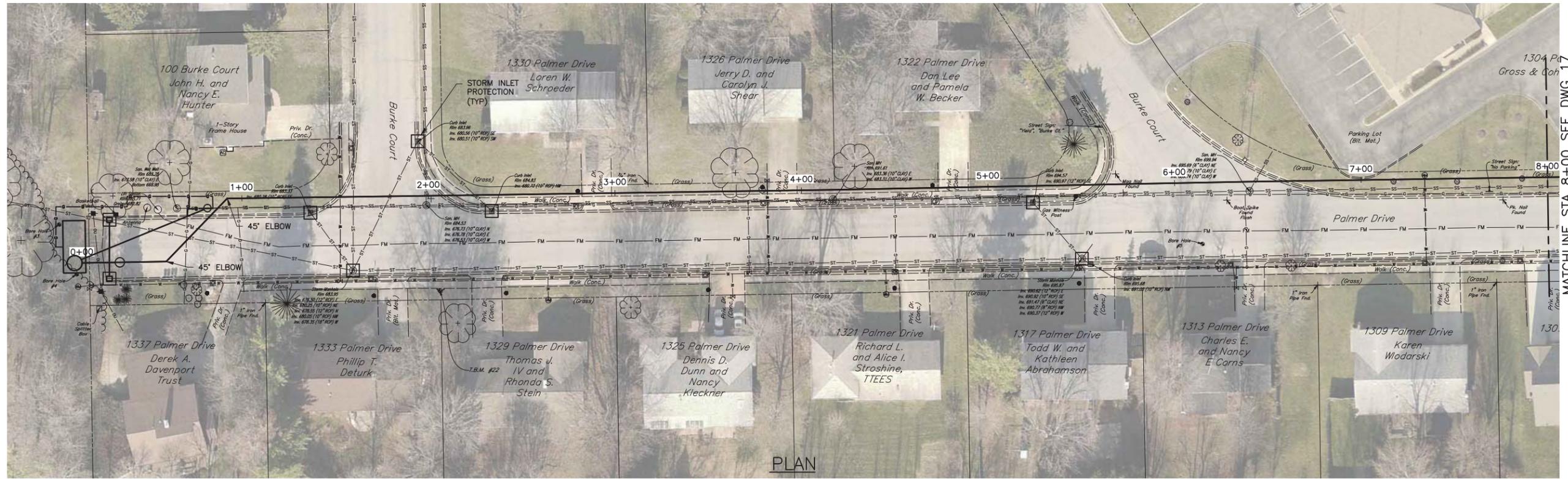
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CITY OF WEST LAFAYETTE, INDIANA  
 SHERATON AND FAIRWAY KNOLLS  
 LIFT STATION IMPROVEMENTS

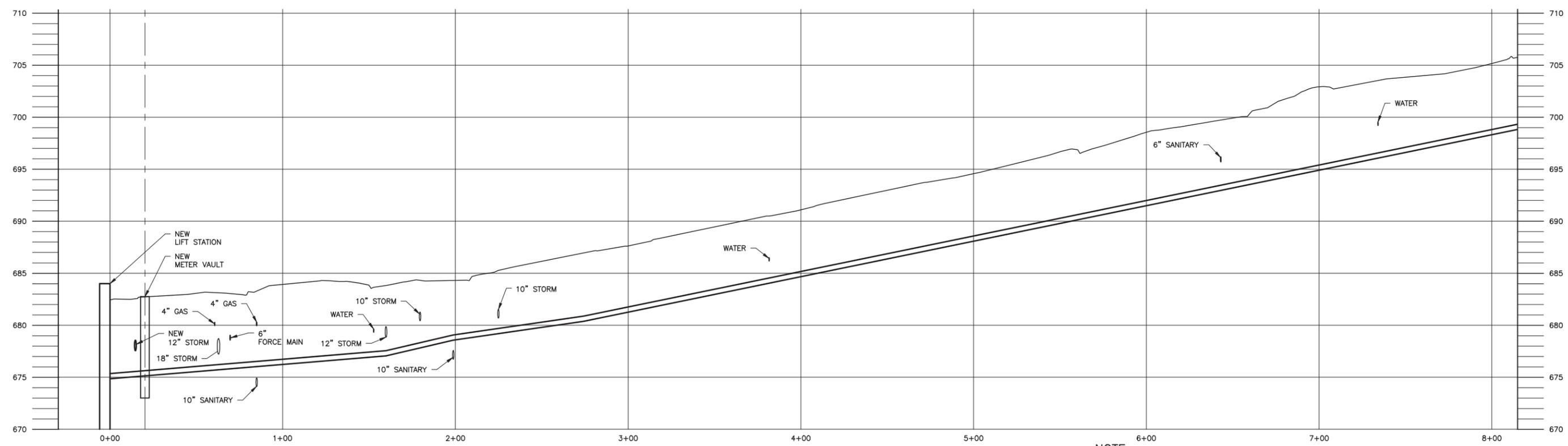
GENERAL PLAN AND PROFILE  
 FORCE MAIN  
 STA 31+00 TO STA 37+90

FILE NAME	0791H0G11-15.DWG
DWG	15
SHEET	15 OF 24
DATE	APRIL 2014
REV	0



MATCHLINE STA 8+00 SEE DWG 17

PLAN



PROFILE

- NOTE:**
- PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
  - INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL SUCH THAT ACCESS TO ALL ROADS AND DRIVES IS MAINTAINED AT ALL TIMES.

FILE: J:\Projects\07911 W Laf. Sheraton LS\21 CADD\21.05 Working Dwg\079110616-18 1:1 04/16/14 13:09 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

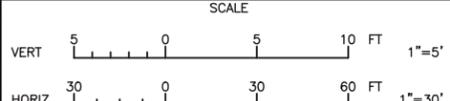
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DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jansch*



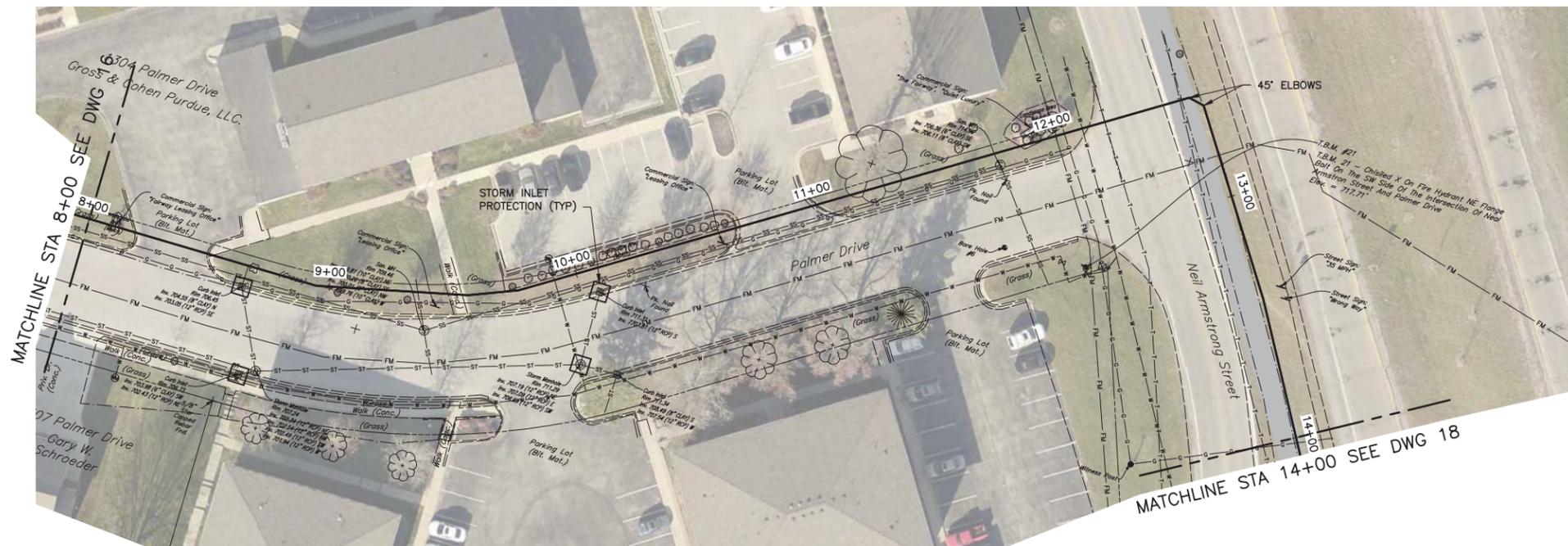
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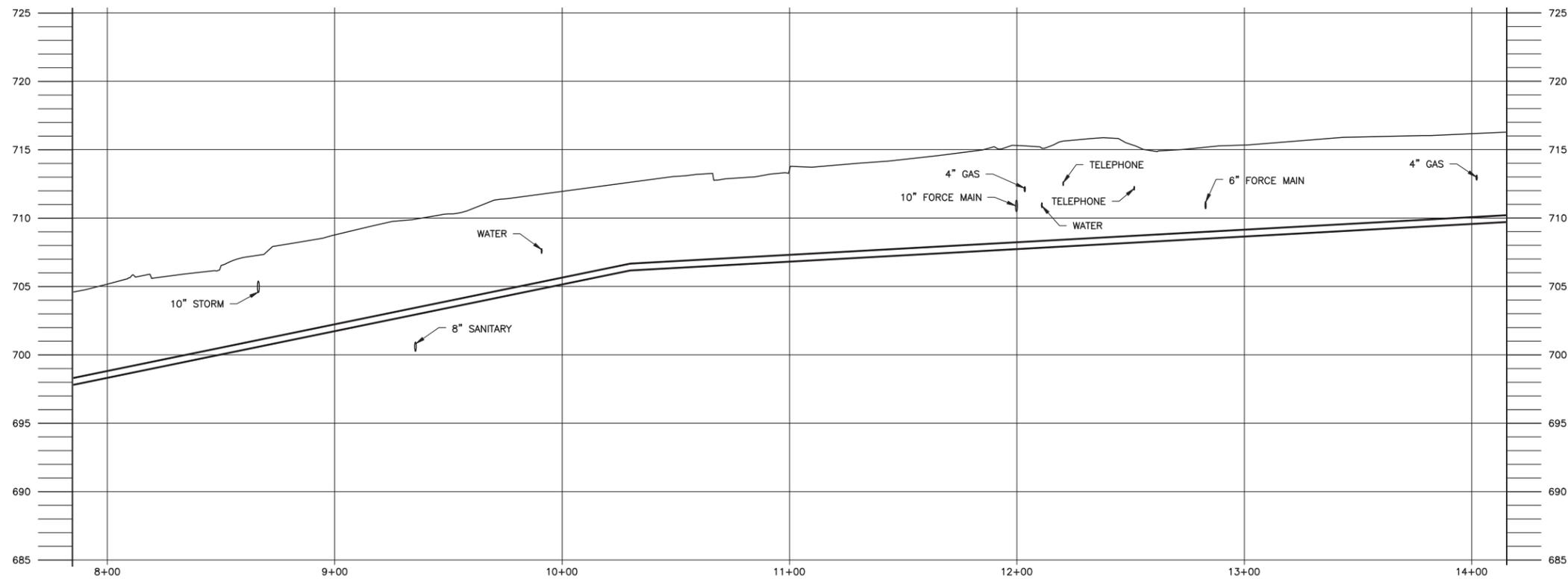
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
PLAN AND PROFILE  
FORCE MAIN  
STA 0+00 TO 8+00

FILE NAME	079110616-18.DWG		
DWG	16		
SHEET	16	OF	24
DATE	APRIL 2014	REV	0



PLAN



PROFILE

NOTE:

1. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
2. INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL SUCH THAT ACCESS TO ALL ROADS AND DRIVES IS MAINTAINED AT ALL TIMES.

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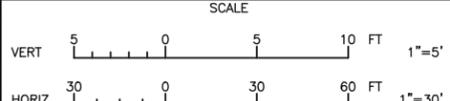
**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014  
*Joseph Jausch*



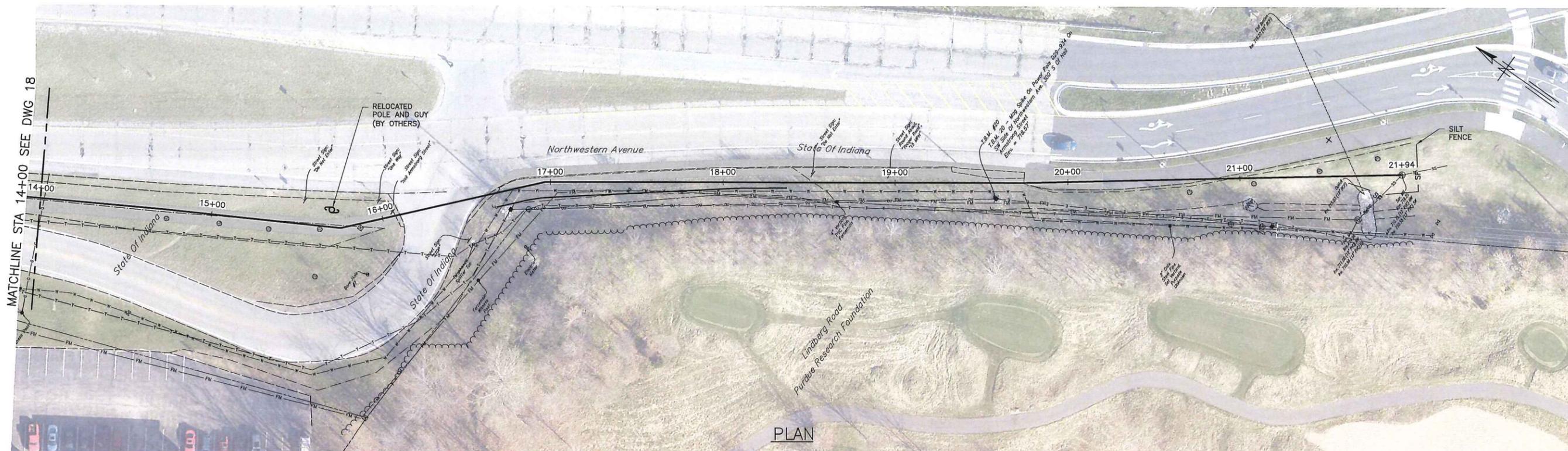
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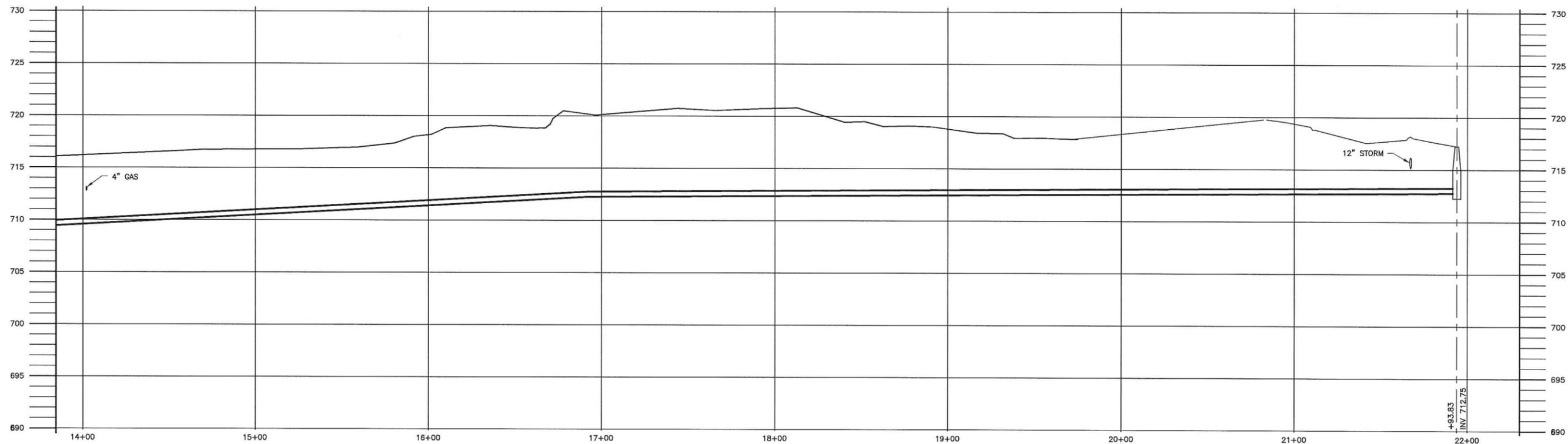
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
PLAN AND PROFILE  
FORCE MAIN  
STA 8+00 TO 14+00

FILE NAME	07910G16-18.DWG
DWG	17
SHEET	17 OF 24
DATE	APRIL 2014
REV	0



PLAN



PROFILE

NOTE:

1. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
2. INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL SUCH THAT ACCESS TO ALL ROADS AND DRIVES IS MAINTAINED AT ALL TIMES.

FILE: J:\Projects\07911 W Laf. Sheraton LS\21 CADD\21.05 Working Dwg\07910G16-18 1:1 04/16/14 1524 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

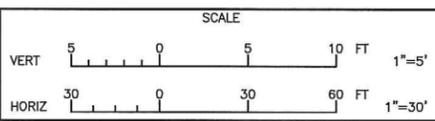
DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jausch*



NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
PLAN AND PROFILE  
FORCE MAIN  
STA 14+00 TO 21+94

FILE NAME	07910G16-18.DWG		
DWG	18		
SHEET	18	OF	24
DATE	APRIL 2014	REV	0

GENERAL NOTES FOR PRE-FABRICATED BUILDING FOUNDATION

GENERAL NOTES FOR PRECAST WELLS AND WELL FOUNDATIONS

**FOUNDATIONS**

1. PLACEMENT AND COMPACTION OF ENGINEERED FILL SHALL BE OVERSEEN BY THE TESTING AGENCY. PLACE FILL MATERIAL IN LAYERS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS FOR THE 12 INCH COMPACTED GRANULAR MAT. MECHANICALLY COMPACT EACH LAYER TO AT LEAST THE REQUIRED MINIMUM DRY DENSITY.
2. FOR INFORMATION REGARDING SUBSURFACE CONDITIONS, REFER TO GEOTECHNICAL INVESTIGATION REPORT, PREPARED BY PATRIOT ENGINEERING AND ENVIRONMENTAL, INC. DATED AUGUST 8, 2013. (PATRIOT PROJECT NUMBER 04-13-09B2) AND ADDENDUM NO. 1 DATED NOVEMBER 18, 2013 AND ADDENDUM NO. 2 DATED JANUARY 10, 2014.
3. SEE GEOTECHNICAL REPORT FOR UNDERCUTTING ANTICIPATED TO ACHIEVE THE SHALLOW MAT NET ALLOWABLE BEARING PRESSURE OF 1500 PSF.
4. DESIGN SHALLOW MAT FOUNDATION FOR MINIMUM DIFFERENTIAL SETTLEMENT WITH LIFT STATION WELL.
5. SEE GEOTECHNICAL REPORT FOR ALTERNATE INTERMEDIATE FOUNDATION OPTIONS FOR SHALLOW MAT FOUNDATION. (ADDENDUM NO. 1)
6. IT IS VERY IMPORTANT THAT THE TESTING AGENCY REPRESENTATIVE BE ON SITE TO MONITOR SOIL CONDITIONS.

**REINFORCING STEEL**

1. PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05), UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL OF STANDARD PRACTICE".
3. DETAILS OF REINFORCING STEEL FABRICATION AND PLACEMENT SHALL CONFORM TO ACI "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) UNLESS OTHERWISE INDICATED.
4. REINFORCING STEEL BENDS, HOOKS AND LAP SPLICES SHALL CONFORM TO THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05) UNLESS OTHERWISE INDICATED.
5. PROVIDE STANDEES FOR THE SUPPORT OF TOP REINFORCEMENT FOR FOOTINGS.
6. FIELD BENDING OF REINFORCING STEEL IS PROHIBITED.
7. SUBMIT ALL REINFORCING STEEL FABRICATION DRAWINGS FOR REVIEW.

**CONCRETE**

1. THE MIXING, HANDLING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05).
2. PROVIDE 3/4 INCH CHAMFERS ON EXPOSED CORNERS OF CONCRETE EXCEPT THOSE ABUTTING FLOOR SLABS.
3. FINISHING OF SLABS: AFTER SCREEDING, BULL FLOATING AND FLOATING OPERATIONS HAVE BEEN COMPLETED, APPLY FINAL FINISH AS INDICATED BELOW.
  - a. MAT FOUNDATION. . . . . NON-SLIP BROOM FINISH
4. FINISHING OF FORMED SURFACES: FINISH FORMED SURFACES AS INDICATED BELOW:
  - a. SIDES OF FOOTINGS. . . . . NONE
5. CURING OF SLABS: CURE SLABS WITH CURING COMPOUNDS OR MOISTURE RETENTION COVERS.
6. FINISH CONCRETE SLABS TO THE FOLLOWING F- NUMBERS:  
FF = 25, FL = 20

**COORDINATION WITH OTHER TRADES**

1. THE CONTRACTOR SHALL COORDINATE AND CHECK ALL DIMENSIONS RELATING TO ARCHITECTURAL FINISHES, MECHANICAL OPENINGS, EQUIPMENT, ETC. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. MECHANICAL AND ELECTRICAL OPENINGS THROUGH CONCRETE SLABS LARGER THAN 6 INCHES IN DIAMETER, NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE ARCHITECT/ENGINEER. OPENINGS 8 INCHES OR LESS SHALL HAVE AT LEAST 1"-0" CLEAR BETWEEN OPENINGS UNLESS APPROVED BY THE ARCHITECT/ENGINEER.
3. VERIFY DIMENSIONS AND LOCATIONS OF MECHANICAL AND ELECTRICAL OPENINGS THROUGH CONCRETE SLABS, SHOWN ON THE STRUCTURAL DRAWINGS, WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS.
4. THE FOLLOWING CONNECTION COMPONENTS, TO BE EMBEDDED IN CONCRETE, ARE PROVIDED BY THE CONTRACTOR:
  - a. WELL ACCESS HATCH FRAME
  - b. ANCHOR BOLTS FOR PRE-FABRICATED BUILDING

COORDINATE THE SUPPLYING AND INSTALLATION OF THESE ITEMS SO THEY ARE CAST INTO THE NEW CONSTRUCTION.
5. DO NOT INSTALL CONDUIT IN SLABS.

CONCRETE SCHEDULE				
CLASS	28 DAY COMPRESSIVE STRENGTH	AIR CONTENT	CONCRETE PLACEMENT	REMARKS
A	4000 PSI	6% +/- 1%	SHALLOW MAT FOUNDATION	MIDRANGE WATER REDUCING ADMIXTURE REQUIRED

**DESIGN INFORMATION**

**GEOTECHNICAL**

NET ALLOWABLE BEARING PRESSURE FOR SHALLOW MAT FOUNDATION = 1500 PSF

**CONCRETE**

SEE CONCRETE SCHEDULE FOR 28 DAY COMPRESSIVE STRENGTHS.

**REINFORCING STEEL**

REINFORCING BARS: . . . . . ASTM A615, GRADE 60

**DESIGN LIVE LOADS**

LIFT STATION COVER SLAB = 100 PSF  
ACCESS HATCHES = 300 PSF

PRE-FABRICATED STRUCTURE FLOOR SUPPORTED EQUIPMENT

SHERATON = 21,300 LBS  
FAIRWAY = 20,800 LBS

**DESIGN WIND LOADS**

EXPOSURE C  
90 MPH 3 SECOND WIND GUST VELOCITY  
IMPORTANCE FACTOR = 1.00  
PARTIALLY ENCLOSED BUILDING CRITERIA

**DESIGN SEISMIC LOADS**

A. OCCUPANCY CATEGORY III  
B. IMPORTANCE FACTOR, I = 1.0  
C. SEISMIC SITE CLASS:  
SHERATON = SITE CLASS C  
FAIRWAY = SITE CLASS C  
D. Sds = 0.112 G (SHERATON)  
E. Sd1 = 0.089 G (SHERATON)  
F. Sds = 0.112 G (FAIRWAY)  
G. Sd1 = 0.089 G (FAIRWAY)

**CODE**

2008 INDIANA BUILDING CODE  
( 2006 IBC WITH INDIANA AMENDMENTS )

**STRUCTURAL DESIGN CRITERIA FOR SHERATON AND FAIRWAY LIFTSTATIONS PRECAST WELLS AND WELL FOUNDATIONS:**

**DESIGN CODES**

1. 2008 INDIANA BUILDING CODE (IBC 2006 & ASCE 7-05)
2. ACI 350 CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING STRUCTURES

**DESIGN LOADS**

1. LIVE LOADS
  - A. LIFT STATION COVER SLAB.....100 PSF
  - B. ACCESS HATCHES.....300 PSF
  - C. PREFABRICATED STRUCTURE FLOOR SUPPORTED EQUIPMENT SHERATON..... = 21,300 LBS  
FAIRWAY..... = 20,800 LBS
2. SEISMIC LOADS
  - A. OCCUPANCY CATEGORY III
  - B. IMPORTANCE FACTOR, I = 1.0
  - C. SEISMIC SITE CLASS:  
SHERATON ..... = SITE CLASS C  
FAIRWAY..... = SITE CLASS C
  - D. SDS = 0.112 G (SHERATON)
  - E. SD1 = 0.089 G (SHERATON)
  - F. SDS = 0.112 G (FAIRWAY)
  - G. SD1 = 0.089 G (FAIRWAY)

**GEOTECHNICAL INFORMATION**

1. ALL FOUNDATION EXCAVATIONS SHALL HAVE BEARING LEVELS REVIEWED BY THE TESTING AGENCY TO CONFIRM CONFORMANCE WITH DESIGN ASSUMPTIONS BEFORE INSTALLING FOUNDATIONS. TESTING AGENCY SHALL APPROVE BACKFILL MATERIAL AND COMPACTION.
2. 100 YEAR FLOOD ELEVATIONS
  - A. SHERATON..... = 679.76 FT USGS
  - B. FAIRWAY..... = 679.76 FT USGS
3. EXISTING GRADE ELEVATIONS
  - A. SHERATON..... = 681 FT USGS
  - B. FAIRWAY..... = 683 FT USGS
4. LATERAL EARTH DESIGN PRESSURES
  - A. SOIL UNIT WEIGHT..... = 125 PCF (DRY)
  - B. SOIL UNIT WEIGHT = 63 PCF (BOUYANT)
  - C. AT-REST COEFFICIENT = 0.45
  - D. ACTIVE PRESSURE COEFFICIENT = 0.30
  - E. PASSIVE PRESSURE COEFFICIENT = 3.4 (SEE GEOTECHNICAL REPORT ON LIMITATIONS OF USING PASSIVE PRESSURE)
  - F. COEFFICIENT OF FRICTION = 0.3
  - G. MINIMUM FACTOR OF SAFETY AGAINST SLIDING = 1.5
  - H. HYDROSTATIC LATERAL PRESSURE SHALL BE CALCULATED BASED ON THE 100 YEAR FLOOD LEVEL AND ADDED TO LATERAL EARTH PRESSURE
  - I. ALL LATERAL EARTH PRESSURES SHALL INCLUDE 300 PSF SURCHARGE FROM THE PRE-FABRICATED BUILDING FOUNDATION.
  - J. ALL LATERAL EARTH PRESSURES ASSUME A CLEAN WELL-GRADED GRANULAR MATERIAL IS USED FOR BACKFILL. CONTACT GEOTECHNICAL ENGINEER FOR IF OTHER CONDITIONS ARE PRESENT.
  - K. SEE GEOTECHNICAL REPORT FOR CONSTRUCTION INFORMATION CONCERNING, EXCAVATION, BACKFILL, COMPACTION, DEWATERING, ETC...

**DESIGN CONSIDERATIONS**

1. LEAK TEST WATER ELEVATIONS
  - A. SHERATON =
  - B. FAIRWAY =
  - C. DESIGN LOAD CASE; WATER CONTAINING STRUCTURES ARE FILLED WITH WATER TO LEAK TEST ELEVATION WITH NO BACKFILL
2. BOUYANCY
  - A. DESIGN WELL FOUNDATION TO RESIST BOUYANCY WHEN TANK IS EMPTY AND GROUND WATER AT 100 YEAR FLOOD ELEVATIONS
  - B. MINIMUM FACTOR OF SAFETY AGAINST BOUYANCY = 1.25
3. EXCAVATIONS SHALL NOT UNDERMINE ADJACENT FOUNDATIONS. PROVIDE SHEETING, SHORING, TIE-BACKS, UNDERPINNING, ETC... AS REQUIRED.
4. ALL CONSTRUCTION JOINTS IN WATER CONTAINING STRUCTURES SHALL HAVE PVC WATERSTOPS AND BE TREATED WITH CRYSTALLINE WATERPROOFING (DRY PACK AND SLURRY) IN ACCORDANCE WITH THE CRYSTALLINE WATERPROOFING MANUFACTURER'S RECOMMENDATIONS.
5. PRECAST CONCRETE SUPPLIER SHALL DESIGN 8"-11" INSIDE DIAMETER PRECAST WELLS AND WELL FOUNDATIONS IN ACCORDANCE WITH DESIGN CRITERIA GIVEN HERE.

**CONCRETE MIX DESIGN FOR WATER CONTAINING STRUCTURES**

1. MINIMUM 28 DAY COMPRESSION STRENGTH = 4000 PSI
2. MAXIMUM WATER TO CEMENT RATIO = 0.45
3. MINIMUM CEMENTITIOUS MATERIAL CONTENT = 564 LBS PER CY
4. MINIMUM OF 20% OF CEMENTITIOUS MATERIAL SHALL BE FLYASH MEETING ASTM C 618 CLASS C
5. CONCRETE SHALL NOT BE HAVE CEMENT OR ADMIXTURES THAT ACCELERATE THE SET TIME.
6. CONCRETE SHALL BE AIR ENTRAINED = 6% (PLUS OR MINUS 1%)
7. CONCRETE SHALL HAVE CORROSION INHIBITING ADMIXTURE AT 0.5 GALLONS PER CY; STANDARD: DCI BY W.R. GRACE AND CO

**EXISTING CONSTRUCTION**

1. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS BEFORE PROCEEDING WITH NEW CONSTRUCTION. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. PREVENT UNDERMINING OF THE FOUNDATIONS OF EXISTING STRUCTURES, BY PROVIDING UNDERPINNING, SHORING, BRACING, SHEETING TAKING PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE EXISTING CONSTRUCTION AND TO ENSURE THAT THERE IS NO VERTICAL OR HORIZONTAL MOVEMENT.
  - a. UNDERPIN IN ALTERNATING INCREMENTS SMALL ENOUGH TO ALLOW THE EXISTING FOUNDATIONS TO BRIDGE THE GAPS CREATED BY THE REQUIRED EXCAVATION.
  - b. CAREFULLY MONITOR THE EXISTING CONSTRUCTION ADJACENT TO THE UNDERPINNING, SHORING, BRACING, SHEETING OPERATION FOR SETTLEMENT.
  - c. SUBMIT TO THE ARCHITECT/ENGINEER THE UNDERPINNING, SHORING, BRACING, SHEETING DESIGN, PREPARED BY A REGISTERED PROFESSIONAL ENGINEER FOR REVIEW. INCLUDE AN OUTLINE PROCEDURE AND PERTINATE DETAILS OF THE OPERATION.



**GREELEY AND HANSEN**  
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DESIGNED WEP  
DRAWN SVC  
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APPROVED WEP  
SEAL AFFIXED  
APRIL 16, 2014

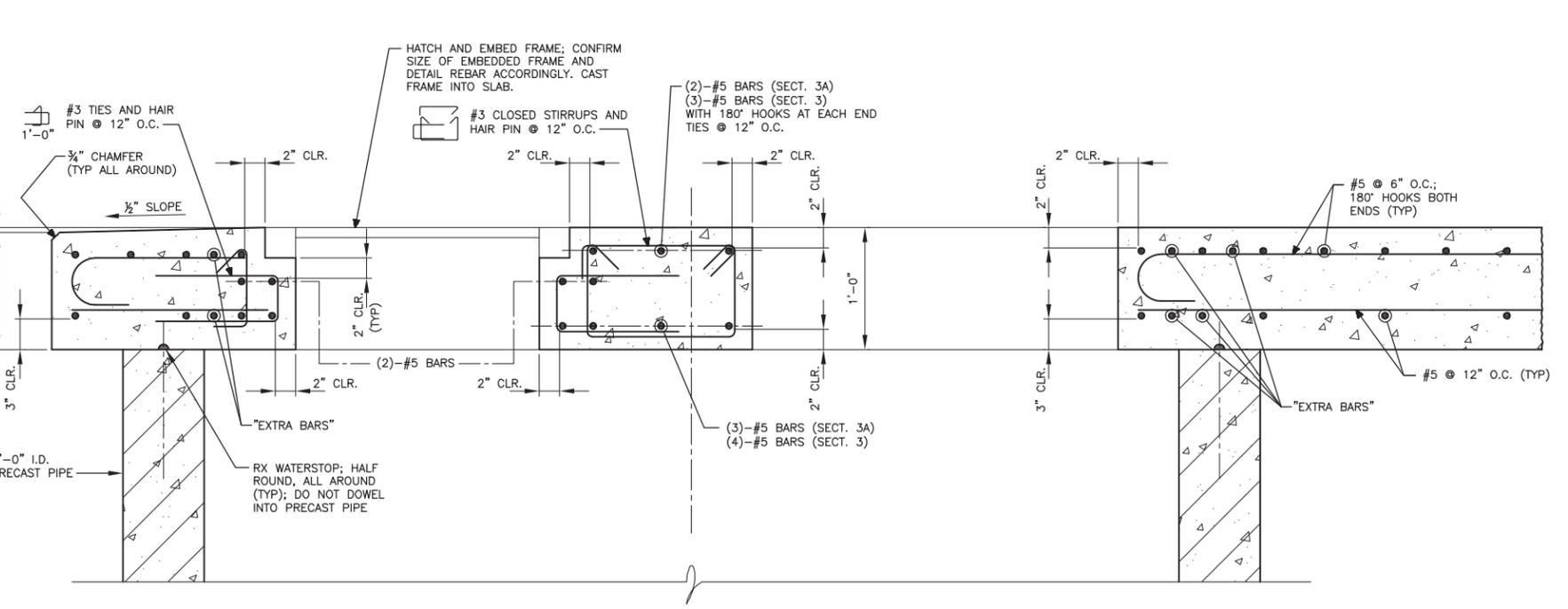
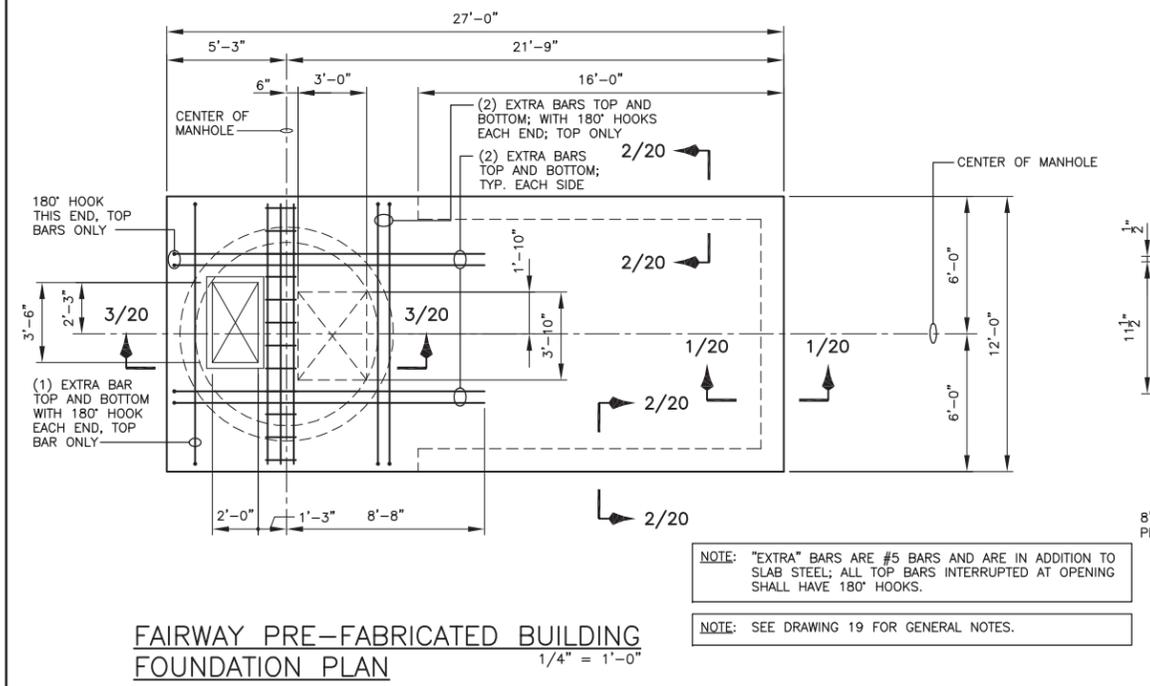
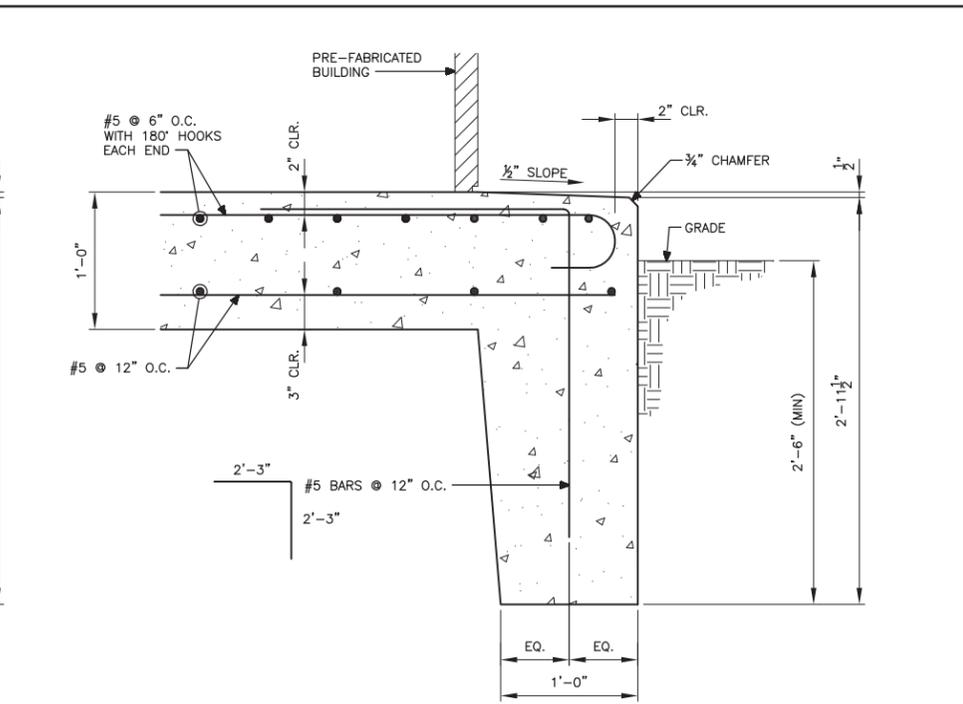
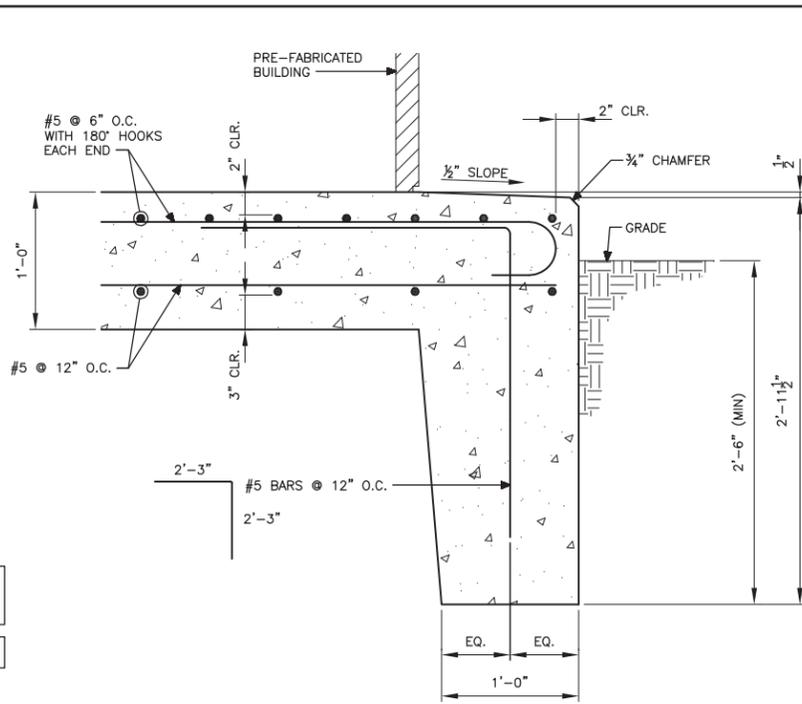
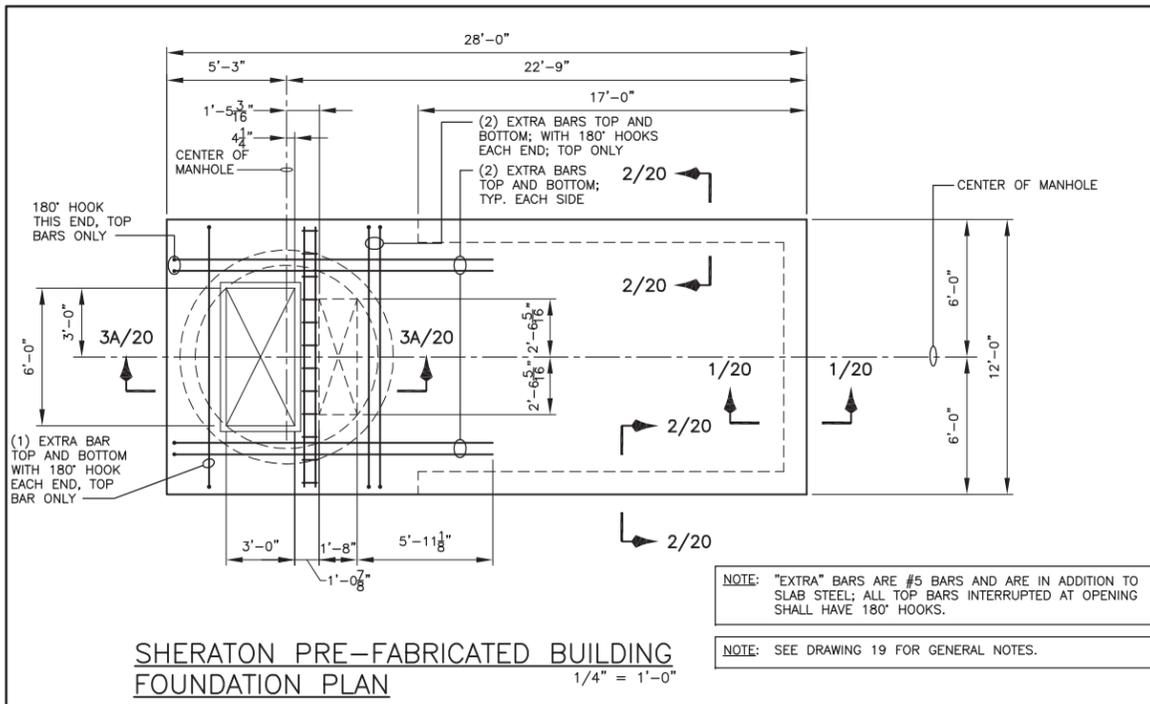
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WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY  
LIFT STATION IMPROVEMENTS

STRUCTURAL  
GENERAL NOTES

FILE NAME	O8645019
DWG	19
SHEET	19 OF 24
DATE	APRIL 2014
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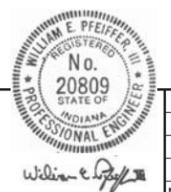


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DESIGNED WEP  
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CHECKED WEP

APPROVED WEP  
SEAL AFFIXED  
APRIL 16, 2014



NO.	DATE	APPD	REVISION

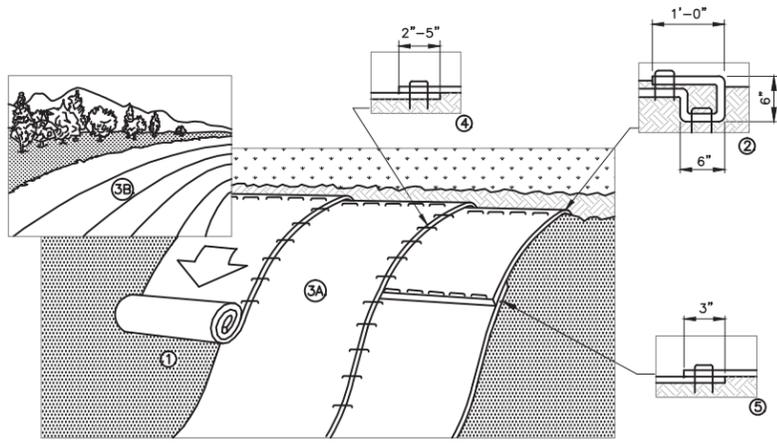
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WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY  
LIFT STATION IMPROVEMENTS

STRUCTURAL  
PLANS AND SECTIONS

FILE NAME: 08645020  
DWG: 20  
SHEET: 20 OF 24  
DATE: APRIL 2014  
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**INSTALLATION GUIDE:**

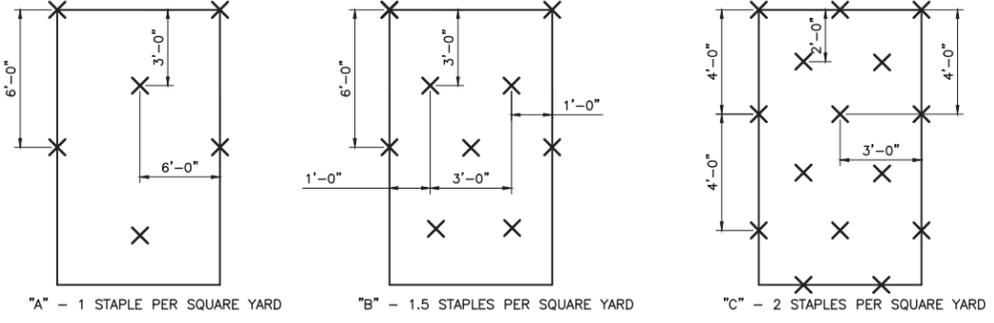
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

**NOTES:**

1. EROSION CONTROL MATS ARE INTENDED TO PREVENT EROSION AND HOLD SEED AND MULCH IN PLACE ON STEEP SLOPES AND IN CHANNELS SO THAT VEGETATION CAN BECOME WELL ESTABLISHED.
2. EROSION CONTROL MATS SHOULD BE USED:
  - A.) FOR PERMANENT STABILIZATION OF SLOPES 10 PERCENT OR GREATER AND WITH MORE THAN 10 FEET OF VERTICAL RELIEF.
  - B.) IN CONJUNCTION WITH SEED FOR FINAL STABILIZATION OF A SLOPE.
3. PROVIDE EROSION CONTROL MATS WHERE SHOWN AND AS REQUIRED FOR SLOPE PROTECTION AND RESTORATION.
4. EROSION CONTROL MATS SHALL BE AS WIDE AS NECESSARY TO PROTECT THE AREA DISTURBED BY CONSTRUCTION.
5. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

**EROSION CONTROL MAT**

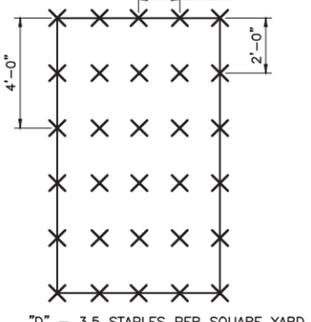
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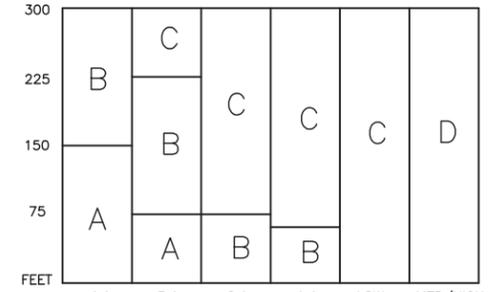
"A" - 1 STAPLE PER SQUARE YARD

"B" - 1.5 STAPLES PER SQUARE YARD

"C" - 2 STAPLES PER SQUARE YARD



"D" - 3.5 STAPLES PER SQUARE YARD

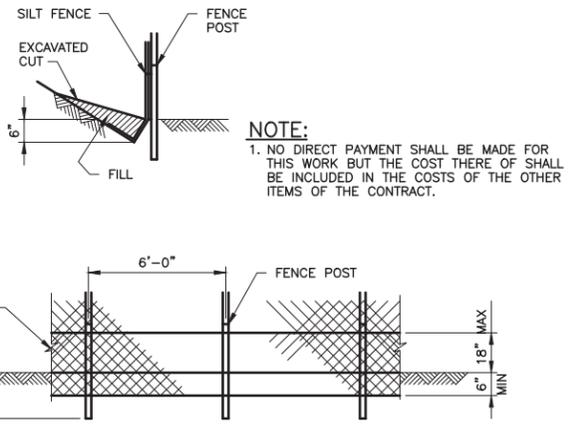


SLOPE LENGTH

FEET  
4:1 3:1 2:1 1:1 LOW FLOW CHANNEL MED/HIGH FLOW CHANNEL AND SHORELINE

**EROSION CONTROL MAT - STAPLE GUIDE**

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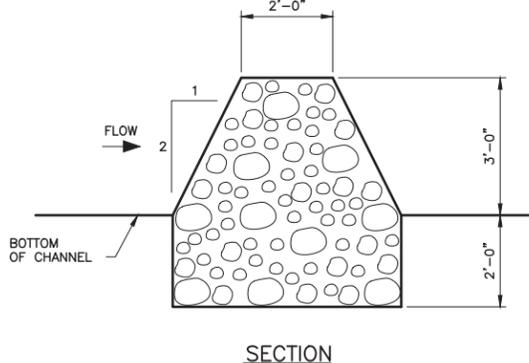
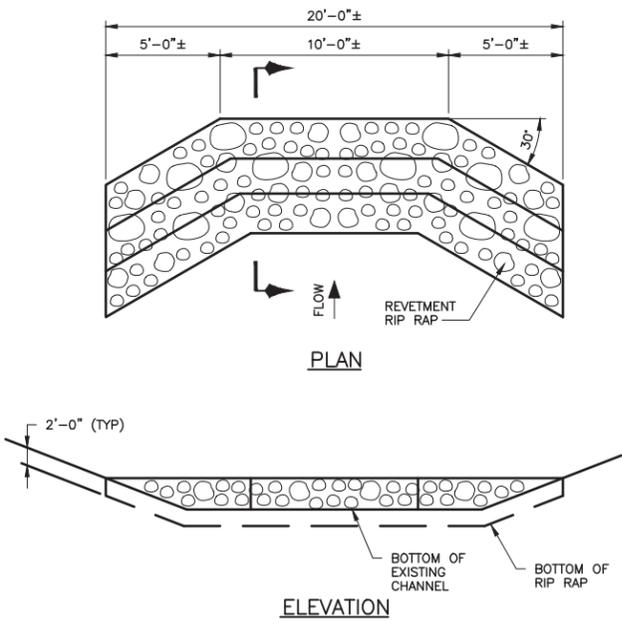
**NOTE:**

1. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

- INSTALLATION**
1. A 6" DEEP CUT IS MADE ALONG THE UPHILL SIDE OF THE PROPOSED SILT FENCE.
  2. 2" HARDWOOD OR STEEL FENCE POST ARE INSTALLED 6' APART (OR 8' IF SILT FENCE HAS WIRE BACKING).
  3. THE SILT FENCE IS UNROLLED ALONG THE FENCE LINE.
  4. ONE END OF THE BUILT-IN ATTACHMENT CORD WHICH RUNS THROUGH THE FULL LENGTH OF THE FENCE IS WRAPPED AROUND AND SECURED TO THE FIRST FENCE POST.
  5. THE FENCE IS PULLED TO THE NEXT POST AND A SMALL SLICE IS MADE IN THE HEM ABOVE THE CORD. THE CORD IS PARTIALLY PULLED OUT, PULLED TAUT AND WRAPPED TWICE AROUND THE POST.
  6. THE PROCESS IS REPEATED UNTIL THE LAST POST IS REACHED, AT WHICH POINT THE CORD IS SECURED.
  7. THE LOWER 8" OF THE FENCE IS LAYED UPHILL IN THE CUT AND BACKFILLED WITH SOIL.

**SILT FENCE DETAIL**

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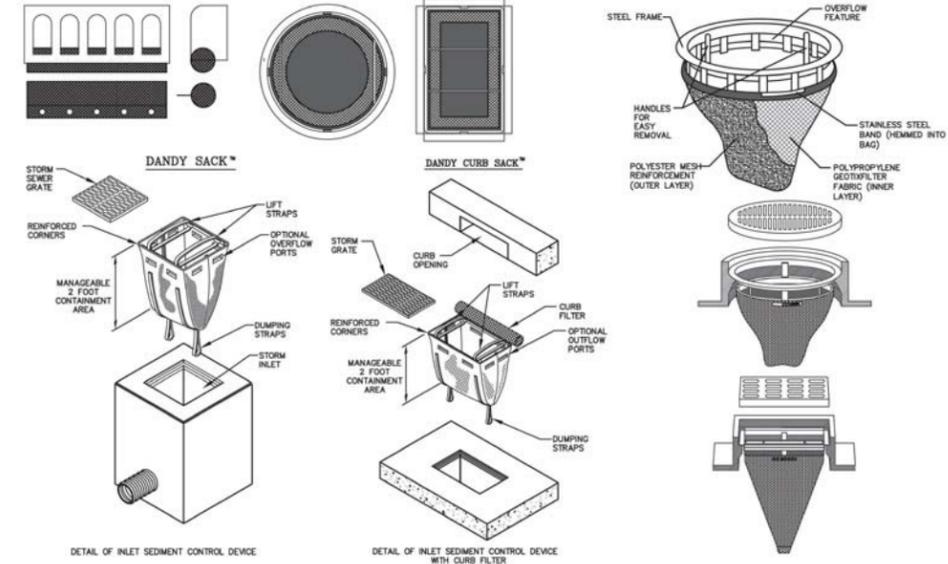


**NOTES:**

1. INSTALL AND MAINTAIN SEDIMENT TRAPS WHERE SHOWN AND AS REQUIRED DOWNSTREAM OF CONSTRUCTION AREA BEFORE COMMENCING WITH ANY CONSTRUCTION ACTIVITIES WHICH CAUSE SILTATION OF CREEKS AND DITCHES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR BYPASSING ALL WATER FROM UPSTREAM OF CREEK/DITCH CROSSING TO DOWNSTREAM OF SEDIMENT TRAP.
3. AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES WHICH CAUSE SILTATION, ALL SEDIMENTS WHICH HAVE COLLECTED ON THE UPSTREAM SIDE OF THE SEDIMENT TRAP SHALL BE REMOVED, AND DISPOSED OF AT AN OFF-SITE LOCATION. THE SEDIMENT TRAP SHALL THEN BE RESHAPED TO THE ORIGINAL CHANNEL DIMENSIONS. WHEN APPROPRIATE THE EXCESS REVETMENT RIP RAP SHALL BE RANDOMLY PLACED IN THE CHANNEL BOTTOM BETWEEN THE CHANNEL CLEARING LIMITS. OTHERWISE REMOVE AND DISPOSE OF EXCESS RIP RAP AT AN OFF-SITE LOCATION.
4. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

**SEDIMENT TRAP**

SCALE: NOT TO SCALE



- Inlet Protection Inspection and Maintenance**
1. Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
  2. Filter Fabric Fences. If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
  3. Gravel Filters. If the gravel becomes clogged with sediment, it must be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.
  4. Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
  5. Remove storm drain inlet protection once the drainage area is stabilized.
  6. Clean and regrade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

**STORM INLET PROTECTION DETAIL**

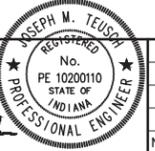
SCALE: NOT TO SCALE

\*\* CONTRACTOR TO USE CATCH-ALL STORMWATER INLET PROTECTOR, DANDY BAG OR APPROVED ALTERNATE.

FILE: J:\Projects\07911 W Ldt\_Sheraton\_US21 CAD\21.05 Working Dwg\079110G21\_11\_04/16/14 11:14 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED	TSH	APPROVED	
DRAWN	MJR	SEAL AFFIXED	
CHECKED	JMT	APRIL 16, 2014	



NO.	DATE	APPD	REVISION

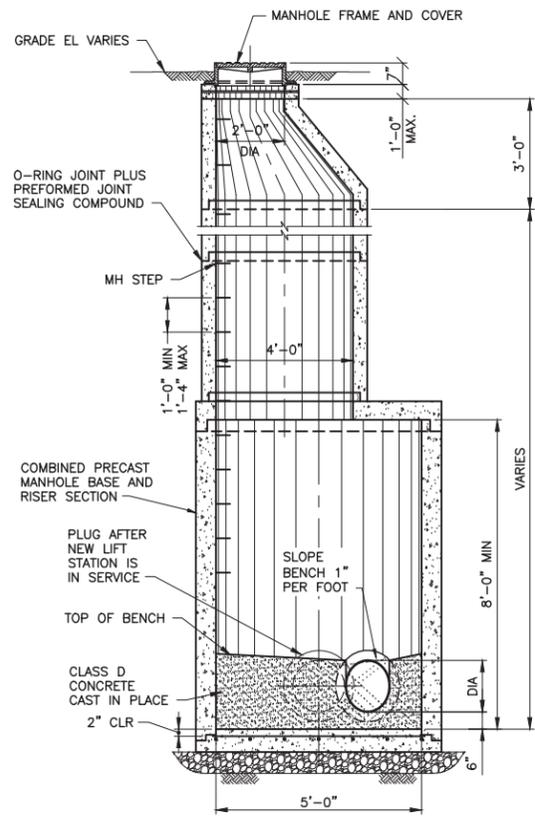
SCALE	NOT TO SCALE
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CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS LIFT STATION IMPROVEMENTS

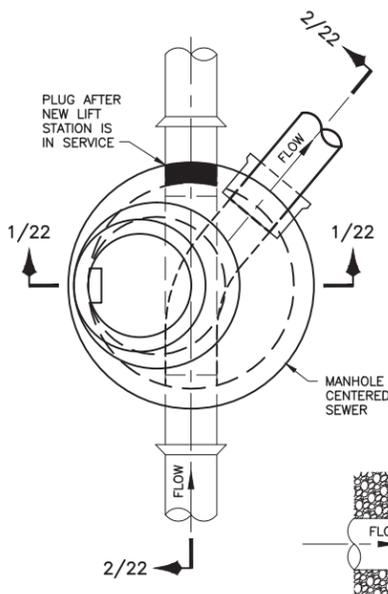
GENERAL EROSION AND SEDIMENT CONTROL DETAILS
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FILE NAME	079110G21.DWG
DWG	21
SHEET	21 OF 24
DATE	APRIL 2014 REV 0

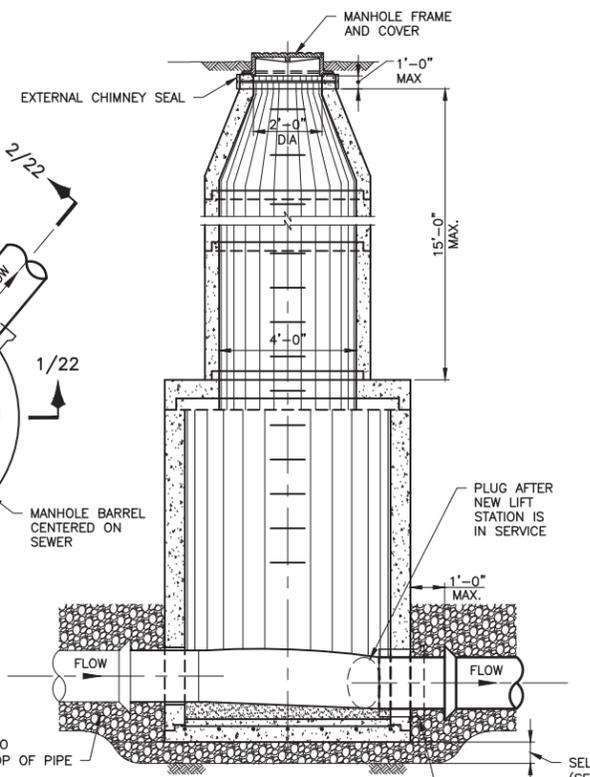
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SECTION 1/22



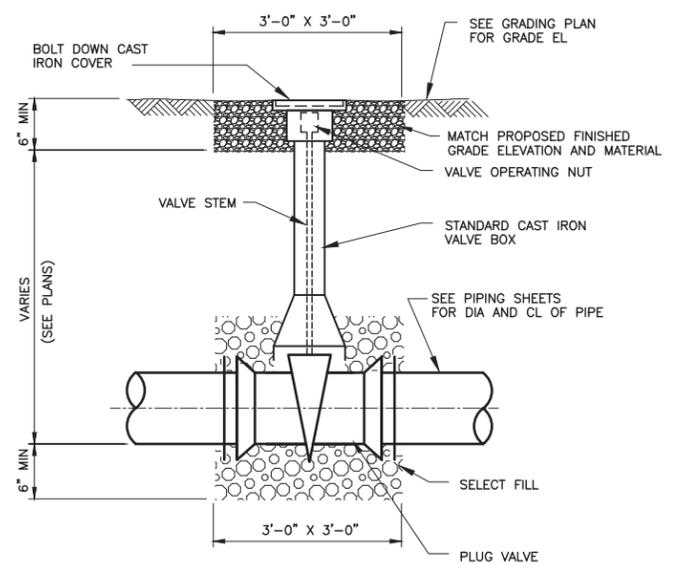
DOGHOUSE MANHOLE  
SCALE: NOT TO SCALE



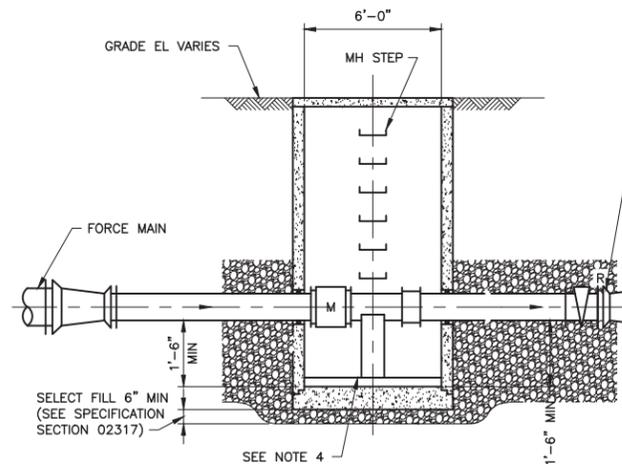
SECTION 2/22

**NEW MANHOLE CONSTRUCTION PROCEDURES**

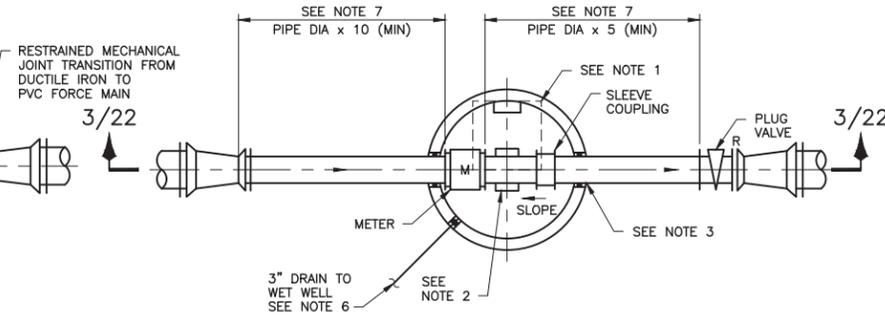
1. EXISTING SEWERS SHALL REMAIN IN SERVICE.
2. EXPOSE PIPE, VERIFY SIZE AND TYPE.
3. CONSTRUCT NEW MANHOLE BASE.
4. PLACE PRECAST MANHOLE SECTION WITH OPENINGS CUT FOR EXISTING SEWER.
  - A. CLEAN EXISTING PIPE AND WRAP PREFORMED JOINT SEALING COMPOUND AT MANHOLE.
5. PACK NON-SHRINK GROUT BETWEEN MANHOLE BARREL AND SEWER PIPE.
6. AFTER NEW LIFT STATION IS COMPLETE, PLACE CLASS D CONCRETE FILL IN BASE AND FLOW CHANNEL.
7. LEAK TEST MANHOLE.
8. REMOVE TOP PORTION OF EXISTING SEWER PIPE.



VALVE BOX DETAIL  
SCALE: NOT TO SCALE



SECTION 3/22



FLOW METER VAULT

**NOTES:**

1. INSTALL 3'x3' ACCESS DOOR AND FALL PROTECTION GRATING IN ACCORDANCE WITH SPECIFICATION SECTION 11210. PROVIDE 1 1/2\"/>
2. PROVIDE 1/4"x12\"/>
3. INSTALL SLEEVES AND ANNULAR SEALS FOR ALL PROCESS PIPES ENTERING AND EXITING VAULT.
4. PLACE CLASS D CONCRETE FILL. SLOPE FLOOR 1/4\"/>
5. PLACE CLASS D CONCRETE BENCH. SLOPE BENCH 1/4\"/>
6. INSTALL TIDFLEX CHECK VALVE OR EQUAL ON 3\"/>
7. INSTALL SPECIFIED MINIMUM OF STRAIGHT PIPE (NO VALVES, BENDS, ETC.) UPSTREAM AND DOWNSTREAM OF FLOW METER. INSTALL REDUCERS PER TABLE.

FLOW METER DATA TABLE			
LIFT STATION	FORCE MAIN SIZE	METER SIZE	REDUCER SIZE
SHERATON	10"	6"	10"x6"
FAIRWAY KNOLLS	6"	4"	6"x4"

**GREELEY AND HANSEN**  
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INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
DRAWN MJR  
CHECKED JMT

APPROVED  
SEAL AFFIXED  
APRIL 16, 2014

*Joseph Jansch*



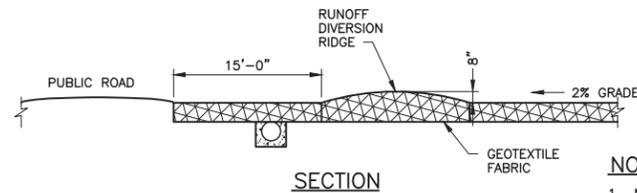
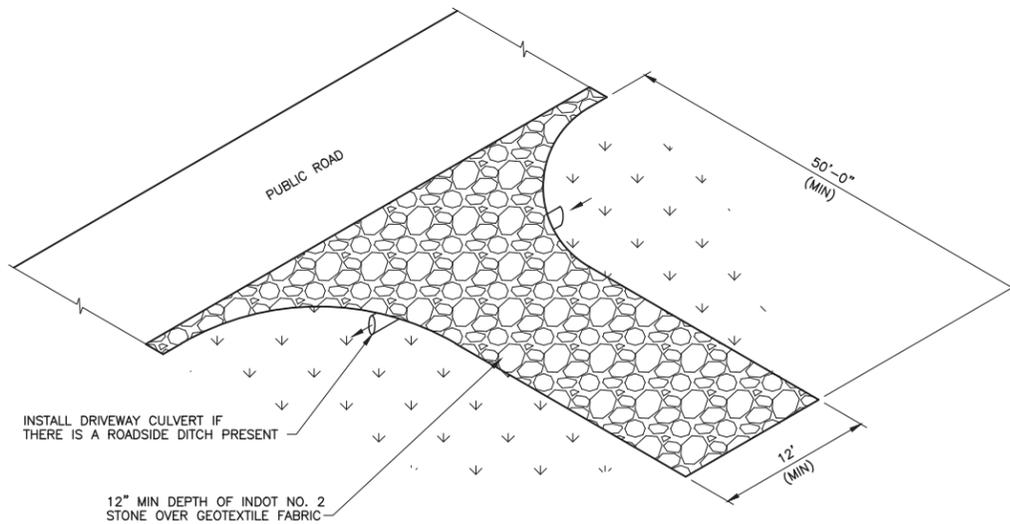
NO.	DATE	APPD	REVISION

SCALE  
NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
MANHOLE DETAILS

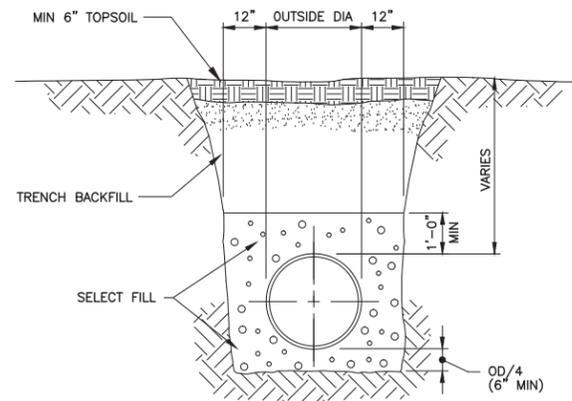
FILE NAME 079110622.DWG  
DWG 22  
SHEET 22 OF 24  
DATE APRIL 2014 REV 0



- NOTE:**
- NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

**CONSTRUCTION ENTRANCE DETAIL**

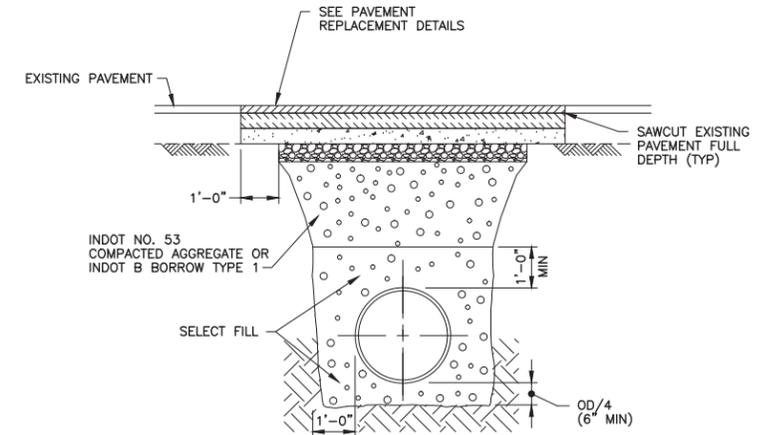
SCALE: NOT TO SCALE



- NOTES:**
- EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
  - SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
  - TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.
  - ADDITIONAL TOPSOIL MAY BE REQUIRED TO MEET MINIMUM REQUIREMENTS.

**TRENCH DETAIL UNIMPROVED AREAS**

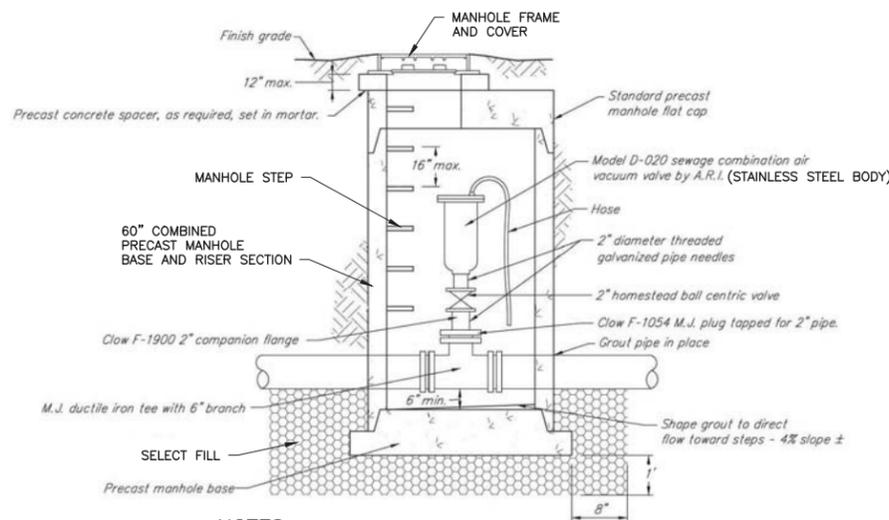
NOT TO SCALE



- NOTES:**
- EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
  - SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
  - TRENCH BACKFILL WITHIN A HORIZONTAL DISTANCE OF 5 FEET AND BENEATH ALL ROADWAYS, DRIVEWAYS, PARKING AREAS AND HIGHWAY SHOULDERS SHALL BE FULL DEPTH INDOT NO. 53 STONE, OR INDOT B BORROW TYPE 1.
  - TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

**TRENCH DETAIL UNDER IMPROVED AREAS**

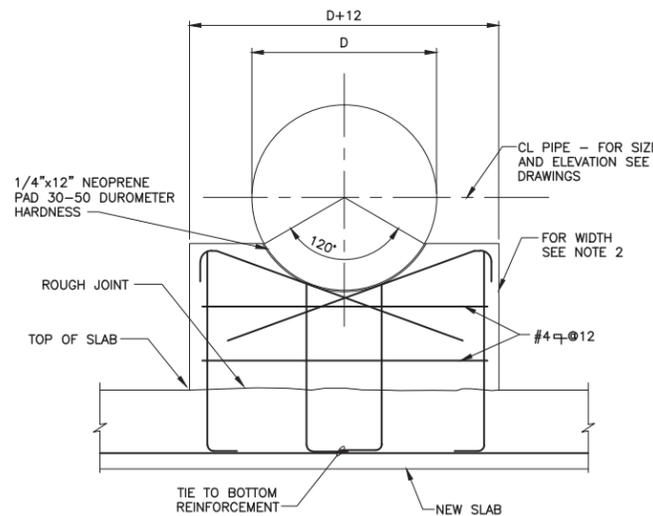
NOT TO SCALE



- NOTES:**
- CONTRACTOR TO PROVIDE BRACING AND SUPPORT FOR AIR RELEASE VALVE AND PIPING
  - POSITION AIR RELEASE VALVE TO ONE SIDE OF THE MANHOLE TO GRANT ACCESS TO VAULT FLOOR.

**SEWAGE FORCEMAIN AIR RELEASE MANHOLE**

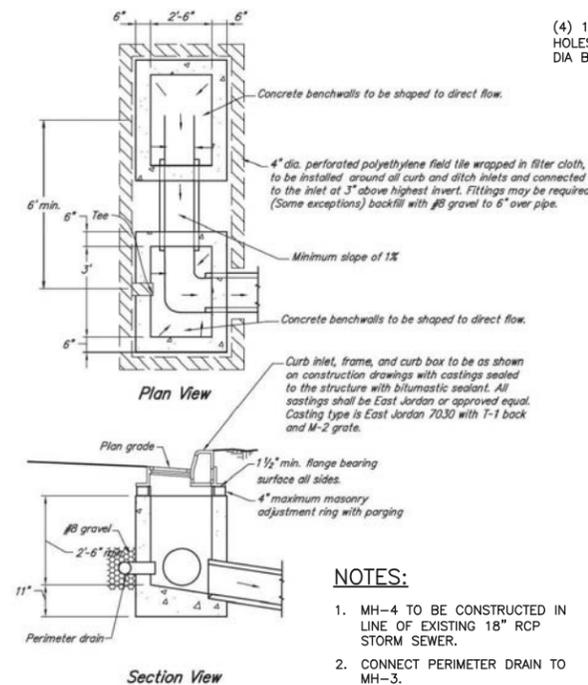
SCALE: NOT TO SCALE



- NOTES:**
- ALL REINFORCEMENT #5@12 EACH FACE UNLESS OTHERWISE NOTED. MINIMUM REINFORCEMENT 4-#5 BARS.
  - FOR ALL PIPES SUPPORT WIDTH SHALL BE 1'-0".
  - FOR LOCATION OF SUPPORTS SEE PIPING DRAWINGS.

**CONCRETE SADDLE DETAIL**

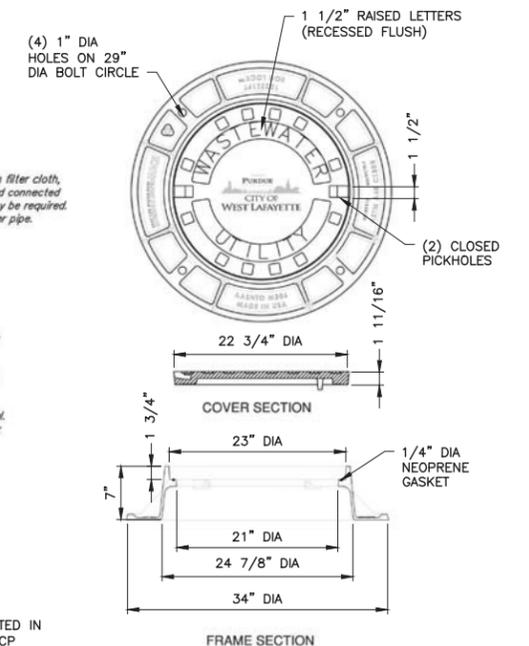
SCALE: NOT TO SCALE



- NOTES:**
- MH-4 TO BE CONSTRUCTED IN LINE OF EXISTING 18" RCP STORM SEWER.
  - CONNECT PERIMETER DRAIN TO MH-3.

**CURB INLETS - PRECAST TYPE**

SCALE: NOT TO SCALE



**MANHOLE FRAME AND COVER**

SCALE: NOT TO SCALE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwgs\07910G23 1:1 04/16/14 11:20 GH-H

**GREELEY AND HANSEN**  
7820 INNOVATION BOULEVARD, SUITE 150  
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH  
DRAWN MJR  
CHECKED JMT  
APPROVED SEAL AFFIXED APRIL 16, 2014  
*Joseph Janssen*



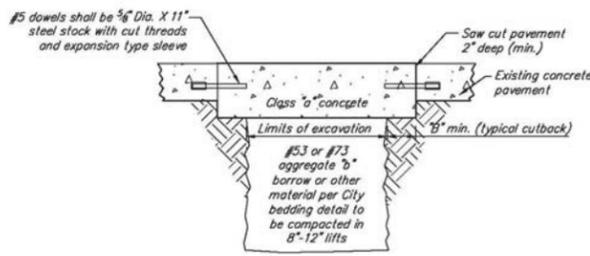
NO.	DATE	APPD	REVISION

SCALE  
NOT TO SCALE

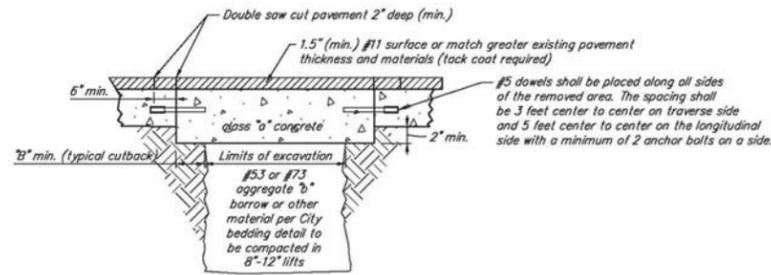
CITY OF WEST LAFAYETTE, INDIANA  
SHERATON AND FAIRWAY KNOLLS  
LIFT STATION IMPROVEMENTS

GENERAL  
MISCELLANEOUS DETAILS

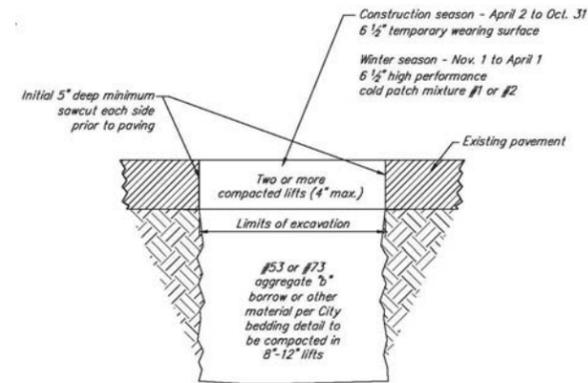
FILE NAME	07910G23.DWG
DWG	23
SHEET	23 OF 24
DATE	APRIL 2014
REV	0



Concrete Pavement Repair



Asphalt Over Concrete Or Alternative Asphalt Pavement Repair



TEMPORARY ASPHALT REPAIR

**Pavement Restoration Notes:**

Permanent pavement restoration:

1. Permanent restoration shall commence immediately upon completion of utility work and be complete within 10 working days unless the City Engineer's office grants a longer period. Request for extension shall be in written form and accompanied with a repair schedule. Inventory of existing temporary restorations, and statement indicating the reason(s) for the extension.
2. Existing pavement saw cuts shall be in straight lines and are perpendicular to the curb (where possible). Edges of broken pavement shall be squared off to provide neat edge for paving.
3. Asphalt shall be placed using professional means to establish a hard, smooth, even graded surface. Compaction shall be done thoroughly and uniformly by a machine roller. Areas too small for machine rolling shall be compacted by hand with mechanical compaction equipment upon prior approval of the City. All courses shall be initially rolled with the roller traveling parallel to the centerline of the pavement beginning at each edge and working toward the center. All rolling and tamping operations shall be completed prior to asphalt cooling to below 180° F.
4. Prior to tack coating subbase and edges, the existing surface shall be free of irregularities to provide a reasonably smooth and uniform surface to receive treatment. The edges of existing pavement shall be cleaned to permit adhesion. Tack coat shall not be applied to wet surfaces or when the air temperature is below 45° F. Tack coat may be rolled, brushed or mopped. All excess tack coat shall be squeegeed from the surface.
5. All pavement restoration materials to be per INDOT "standard specifications", most recent edition.

Temporary pavement repair:

1. Existing pavement initial saw cut to be 5" minimum depth to obtain straight lines perpendicular from the curb edge and neat edge for paving. Edges of broken pavement shall be squared off and trimmed to neat straight lines.
2. Temporary pavement material is to be 6 1/2" thick hot mix asphalt. asphalt cold patch, bag asphalt and crushed stone are unacceptable for use. The use of steel street plates must be requested in written form and accompanied with a repair schedule, inventory of existing temporary restorations, and statement indicating the reason(s) for use of plates.
3. During winter season when the permanent patch cannot be completed within 10 working days (November 1 thru April 14), if hot mix asphalt is not available, use INDOT approved "high performance cold patch" or equal INDOT approved material.

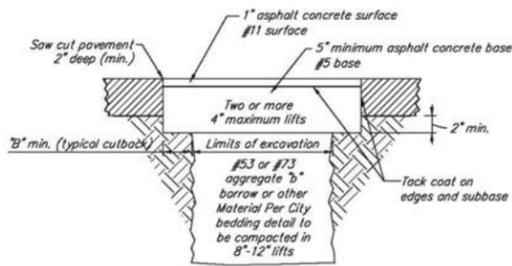
High performance cold patch mixture #1 (upm), is for use in wet and cold conditions and workable at temperatures as low as -15° F.

High performance cold patch mixture #2 (cm300), is for use in wet and cold conditions and workable at temperatures as low as 32° F.

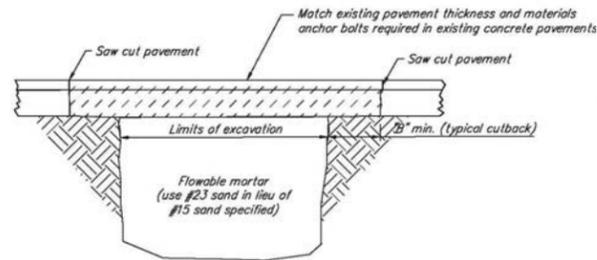
4. All materials are to be compacted to form a firm and smooth transition between old and new surface grade. Do not apply hot mix asphalt on a wet surface.
5. Upon completion of backfilling, temporary pavement on streets shall be placed by the end of the work day.
6. Temporary street restoration is intended to be an interim measure until conditions allow for permanent restoration of the street. The City realizes that at times, temporary restoration is necessary, such as, during the winter season when the asphalt plants are closed and when freezing temperatures make permanent restoration not feasible or when permit work precedes City street reconstruction or rehabilitation permit holders are to minimize the use of temporary restorations when possible. Any work undertaken before the fall asphalt plant closings must be permanently restored prior to the asphalt plant closings. Only work undertaken on or after December 1 (given that the asphalt plants have closed) may be carried over to permanent restoration in the following spring season. All temporary restoration placed during the winter season must be permanently restored within four (4) weeks of spring asphalt plant openings, but no later than may 15th. The City Engineer's office may grant extensions beyond May 15th for permanent restorations when requested in writing and accompanied with a repair schedule, inventory of existing temporary restorations, and a statement indicating the reason(s) for the extension. All temporary restoration must be maintained by the permit holder until permanent restoration has been made.

Special surface streets:

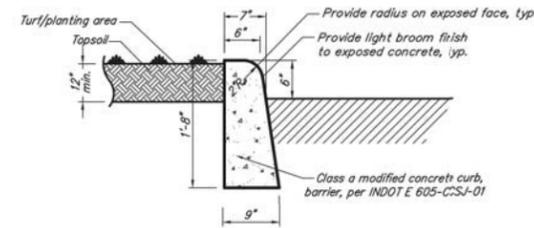
1. Any special surfaces shall be restored in-kind. For example: brick surface streets require all pavement cuts to be restored with brick. Cobblestone surface streets must be restored with cobblestone. Permit holder shall salvage as much of the existing brick or cobblestone as possible for reuse in the restoration and shall supply any remaining material required for the restoration.



Asphalt Pavement Repair



Pavement Repair With Flowable Mortar Backfill  
(Flowable mortar shall not be used when temperatures are below 40° F)  
\*\* Use of flowable mortar requires prior approval from the City Engineer's office



BOX CURB WITH 6" FACE

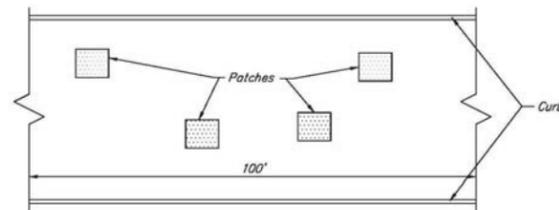
Cutback Table	
Cut- Back "B"	Trench Width
6"	3'-0" or less
9"	3'-1" to 5'-0"
12"	5'-1" or greater

**PERMANENT PAVEMENT RESTORATION**

Not To Scale

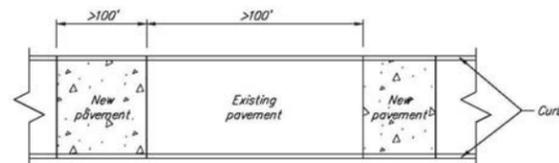
Notes:

All pavement restoration materials to be per INDOT "Standard Specifications" most recent edition.



Multiple cuts shall be defined as any city street or alley, asphalt or concrete that have the following conditions:

1. Four (4) or more patches per 100 lineal feet of roadway by an individual utility per project, and
2. Area cut is greater than 64 sf in 100 lineal feet of roadway by an individual utility per project.

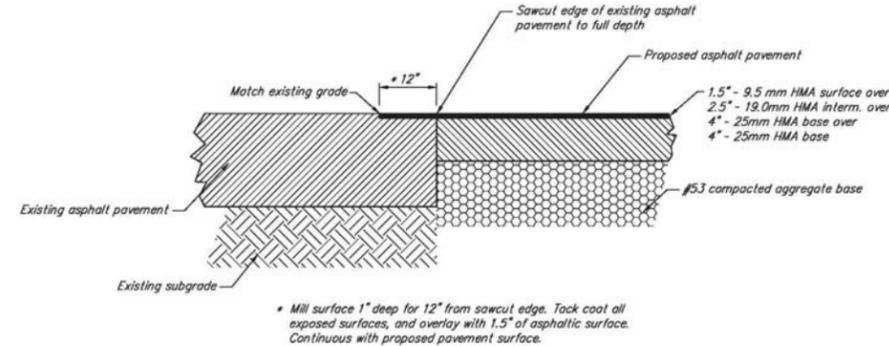


Multiple cuts to be restored as follows:

New pavement areas shall not have gaps of less than 100 feet. Minimum length of new pavement shall be 100 feet.

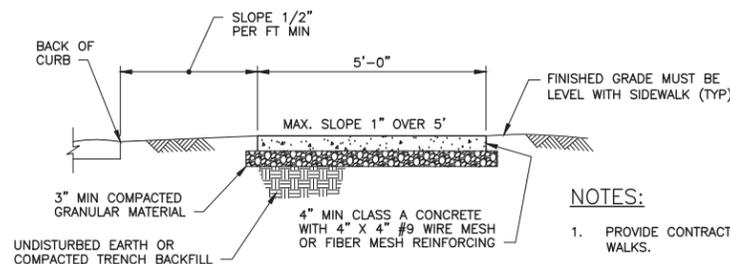
**METHOD FOR REPLACING MULTIPLE OR LARGE CUTS**

Not To Scale



LAP JOINT DETAIL

Not To Scale



SIDEWALK DETAIL

SCALE: NOT TO SCALE

NOTES:

1. PROVIDE CONTRACTION JOINTS AT INTERVALS OF 5 FEET FOR NEW WALKS.
2. PROVIDE 1/2" THICK EXPANSION JOINT AT JUNCTION OF STRUCTURES, CURBS AND AT MINIMUM 25 FOOT INTERVALS.