

GENERAL NOTES: WATER SYSTEMS

1. ALL WATER LINE MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE LOCAL GOVERNING AUTHORITY ENGINEERING DEPARTMENT SPECIFICATIONS AND DETAILS, LATEST EDITION. APPROVAL OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF THE INSTALLATION IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY SPECIFICATIONS AND DETAILS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE WATER LINE CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR IF REQUIRED BY THE GOVERNING AUTHORITY. THE WATER LINE INSTALLATION WILL BE INSPECTED, AND MUST BE APPROVED PRIOR TO BACKFILLING OF THE TRENCH.

3. ALL WATER LINES SHALL MAINTAIN A MINIMUM COVER DISTANCE OF FIVE FEET FROM FINISH GRADE.

4. ALL WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL GOVERNING AUTHORITY WATER ENGINEERING DEPARTMENT, OR THE INDIANA STATE DEPARTMENT OF HEALTH, WHICHEVER IS MORE STRINGENT.

5. SANITARY AND STORM SEWER SEPARATION REQUIREMENTS WITH RESPECT TO WATER MAINS ARE AS FOLLOWS:

A MINIMUM HORIZONTAL SEPARATION OF TEN FEET SHALL BE MAINTAINED BETWEEN ALL SEWER SYSTEMS AND WATER MAIN LOCATIONS. A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE MAINTAINED WHEN SEWERS CROSS UNDER WATER LINES (MEASURED FROM THE BOTTOM OF THE WATER LINE TO THE TOP OF THE SANITARY SEWER).

IF EITHER THE HORIZONTAL OR VERTICAL SEPARATION CANNOT BE MET, THE SEWER SHALL BE CONSTRUCTED OF WATERWORKS GRADE MECHANICAL JOINT DUCTILE IRON PIPE OR SDR 26 PVC PRESSURE PIPE WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. THE SEWER SHALL BE CONSTRUCTED SO THAT THE WATERWORKS GRADE PIPE EXTENDS A DISTANCE OF TEN FEET ON EACH SIDE OF THE WATER MAIN, AND SHALL BE CONSTRUCTED WITH ONE FULL LENGTH OF PIPE CENTERED ON THE WATER MAIN SO THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN.

6. ALL WORK SHALL CONFORM TO STATE AND LOCAL PLUMBING AND BACKFLOW PREVENTION CODES AND SPECIFICATIONS OF THE LOCAL GOVERNING AUTHORITY WATER UTILITY.

7. ALL WATER LINES 3" AND LARGER MUST BE DISINFECTED AND SAMPLES FROM THREE CONSECUTIVE DAYS MUST BE TAKEN TO AN APPROVED TESTING LAB, AND THE LAB ANALYSIS REPORTS MUST BE SUBMITTED TO THE LOCAL GOVERNING AUTHORITY SHOWING THAT THE SAMPLES HAVE PASSED THE TESTS FOR THREE CONSECUTIVE DAYS.

8. VACUUM BREAKERS MUST BE INSTALLED ON ALL EXISTING OR PROPOSED HOSE BIBS, MOP/SERVICE SINKS, AND WALL/YARD HYDRANTS.

9. PER STATE CODE, BACKFLOW DEVICES ARE TO BE TESTED UPON INSTALLATION AND THEN PERIODICALLY THEREAFTER. SUBMIT COPIES OF TESTS TO THE LOCAL WATER ENGINEERING DEPARTMENT.

SYMBOLS LEGEND

- GAS --- EXISTING GAS
- S --- EXISTING SANITARY SEWER
- W --- EXISTING WATER
- OHE --- OVERHEAD ELECTRIC LINE(S) OVERHEAD
- OHT --- TELEPHONE LINE(S)
- OHU --- OVERHEAD CABLE TELEVISION LINE(S)
- WV --- WATER VALVE
- UP --- UTILITY POLE W/ GUY WIRE
- SMH --- 3/4" IRON PIPE W/ CAP MARKED 880041 SET
- SMH --- SANITARY MANHOLE
- DS --- DOWNSPOUT PIPED INTO GROUND
- FH --- FIRE HYDRANT

PROPOSED SANITARY SEWER STRUCTURE SCHEDULE						
STR#	SIZE	RIM ELEV.	DEPTH	INVERT(S)	DETAIL	CASTING/GRATE
S1-1	EXISTING	843.7	7.0	836.62 (N&S), 8" @ 838.52* (W)	EXISTING	EXISTING
S1-2		843.85		8" @ 841.72 (N), 8" @ 841.22 (E)	CLEANOUT	PER DETAIL
S1-3		846.00		8" @ 843.00 (N&S) **	CLEANOUT	PER DETAIL

- 1.) ALL CASTING AND GRATE MODEL NUMBERS REFERENCE EAST JORDAN IRON WORKS CASTING AND GRATES, UNLESS OTHERWISE NOTED. EQUIVALENT MANUFACTURES WILL BE CONSIDERED FOR USE ON THIS PROJECT IF SUBMITTED FOR REVIEW.
- 2.) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL INVERTS AND RIM ELEVATIONS.
- 3.) A NUMBER () IS INVERT, RIM, ETC. IN AN EXISTING STRUCTURE.
- * CONTRACTOR TO ADJUST NEW INVERT IN TO EXISTING STRUCTURE S1-1 TO MAINTAIN A MAXIMUM PIPE DROP OF 1.9 FEET.
- ** CONTRACTOR TO COORDINATE LOCATION AND DEPTH OF SANITARY SEWER SERVICE W/ MECHANICAL PLANS.

CONSTRUCTION NOTES: UTILITY

ALL ITEMS AND RELATED WORK NOTED BELOW SHALL BE SUPPLIED BY THE CONTRACTORS AT HIS EXPENSE PER THE CONTRACT DOCUMENTS. SEE DETAIL SHEETS C501 - C503

- ① STORM SEWER STRUCTURE PER STRUCTURE TABLE
- ② CORE DRILL & GROUT IN PLACE NEW SEWER OUTFALL PIPE
- ③ 88 LF OF 8" PVC SDR 35 SANITARY SEWER @ 3.07% SLOPE STR S1-2 TO STR S1-1 (SEE NOTE ** ON STRUCTURE SCHEDULE)
- ④ 42 LF OF 8" PVC SDR 35 SANITARY SEWER @ 3.05% SLOPE STR S1-3 TO STR S1-2
- ⑤ 2" WATER SERVICE CONNECTION WITH VALVE AND CURB BOX CONTRACTOR TO COORDINATE LOCATION WITH UTILITY AND MECHANICAL PLANS
- ⑥ 6" WATER LINE BY LAKEVILLE UTILITIES, (NOT PART OF THIS CONTRACT)
- ⑦ GAS METER AND SERVICE CONNECTION. CONTRACTOR TO COORDINATE SERVICE ROUTING WITH UTILITY COMPANY AND LOCATION IN PER MECHANICAL PLAN. EXISTING GAS SERVICE LOCATIONS NOT PROVIDED ON SURVEY.

GENERAL NOTES
SEE SHEET C402 FOR STORM SEWER DESIGN

GENERAL NOTES: SANITARY AND STORM SEWERS

1. ALL SANITARY AND STORM SEWER MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE LOCAL GOVERNING AUTHORITY WASTEWATER DEPARTMENT CONSTRUCTION STANDARDS AND THE LOCAL GOVERNING AUTHORITY CONSTRUCTION STANDARDS, LATEST EDITION. APPROVAL OF THESE PLANS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF THE INSTALLATION IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY CONSTRUCTION STANDARDS.

2. ALL COORDINATES SHOWN ALONG ROADWAYS, SIDEWALKS AND PAVEMENT AREAS ARE TO THE FACE OF CURB, OR THE EXTENT OF PAVEMENT SURFACE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE SEWER CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR IF REQUIRED BY THE GOVERNING AUTHORITY.

4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, AND THE LOCATION AND INVERT OF THE EXISTING SANITARY AND STORM SEWERS. ANY CONFLICT BETWEEN THE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHOULD BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OPERATIONS.

5. THE CONTRACTOR SHALL, UPON THE COMPLETION OF SEWER CONSTRUCTION, VERIFY ALL FINAL MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE THE OWNER, ENGINEER, AND APPROPRIATE GOVERNING AUTHORITIES "AS-BUILT" DRAWINGS OF THE ABOVE ITEMS CERTIFIED BY A REGISTERED LAND SURVEYOR IN THE STATE OF INDIANA.

6. ALL SEWER TAPS ARE FROM THE MUNICIPAL SEWER MAIN TO A POINT WITHIN FIVE FEET OF THE BUILDING, UNLESS OTHERWISE NOTED.

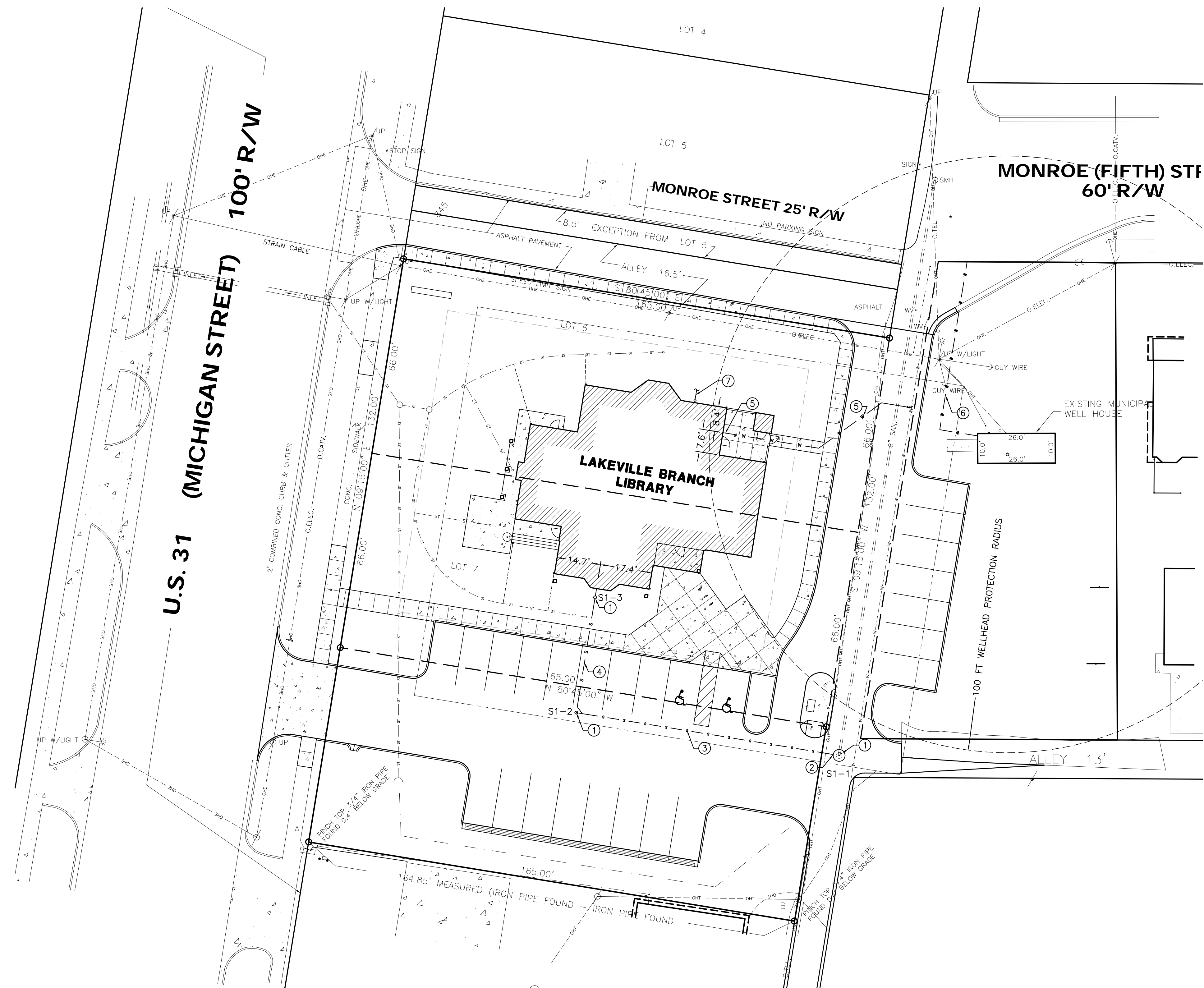
7. SANITARY AND STORM SEWER SEPARATION REQUIREMENTS WITH RESPECT TO WATER MAINS ARE AS FOLLOWS:

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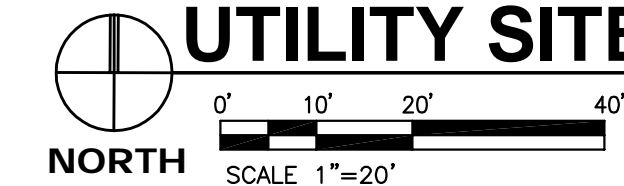
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IF EITHER THE HORIZONTAL OR VERTICAL SEPARATION CANNOT BE MET, THE SEWER SHALL BE CONSTRUCTED OF WATERWORKS GRADE MECHANICAL JOINT DUCTILE IRON PIPE OR SDR 21 PVC PRESSURE PIPE WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. THE SEWER SHALL BE CONSTRUCTED SO THAT ONE FULL LENGTH OF PIPE IS CENTERED ON THE WATER MAIN SO THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN.

8. ALL HDPE TO BE SOLID WALL, CORRUGATED STRUCTURAL PIPE WITH SMOOTH INTERIOR UNLESS OTHERWISE NOTED.



UTILITY SITE PLAN - WATER & SANITARY SEWER



NOTE:
SURVEY INFORMATION PROVIDED BY FISHER LAND SURVEYING SERVICES INC. JOB NO. 219-2005 DATED SEPTEMBER 08, 2006

"Holey Moley" says,
"DON'T DIG BLIND"

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without notifying the underground
location service two (2) working days
before commencing work.

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