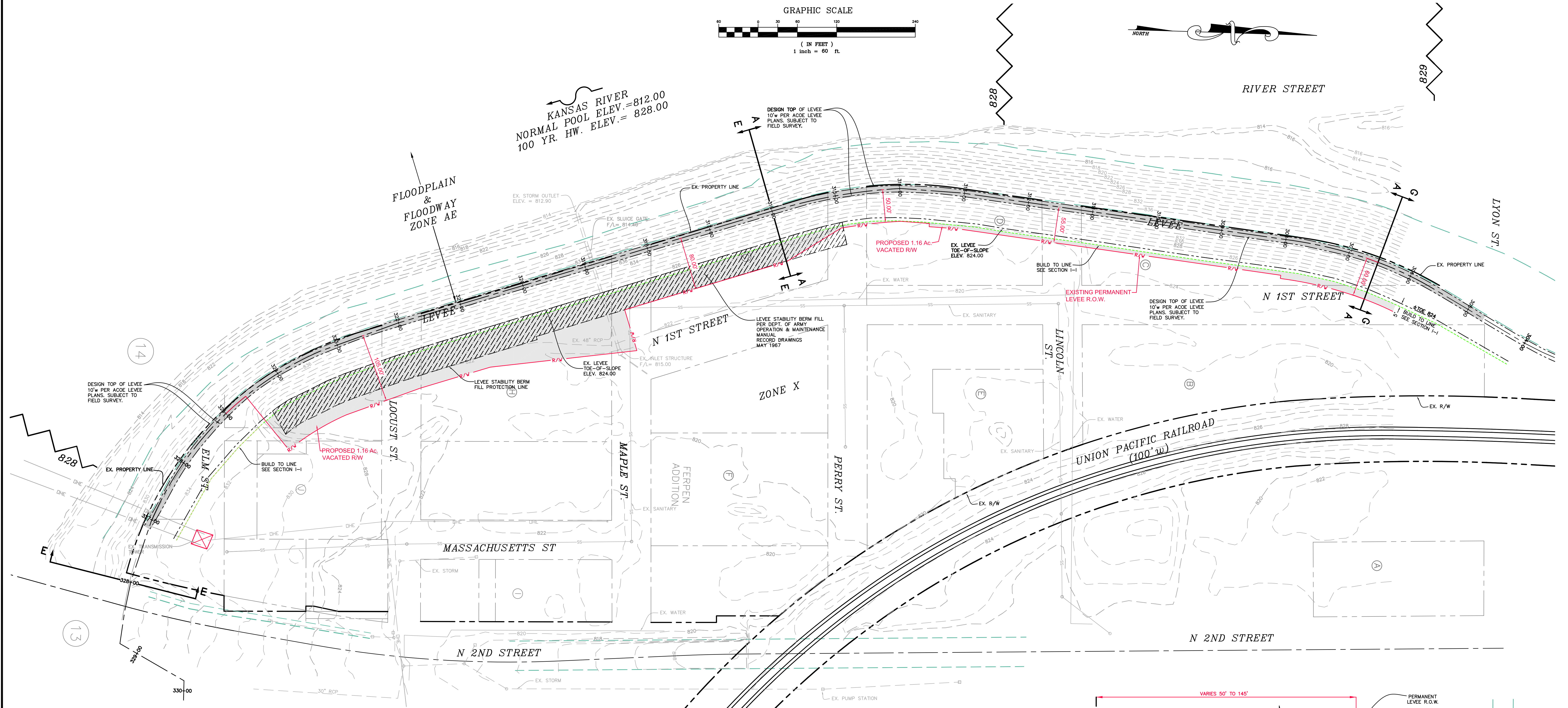


KANSAS RIVER
NORMAL POOL ELEV. = 812.00
100 YR. HW. ELEV. = 828.00



EARTHWORK NOTES:

OPTION OF MAINTAINING ELEVATION 824.00 AT THE TOE OF THE LEVEE AND PROVIDING A UNIFORM 1.0% SLOPE FROM THE LEVEE TO N 2ND STREET AND THE RAILROAD RIGHT-OF-WAY.

BULK CUT..... 0+ CUBIC YARD
BULK FILL..... 40,500+ CUBIC YARD

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL. THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

LEVEE CONSTRUCTION NOTES

- 1.) PROPOSED LEVEE FILL MATERIAL SHALL BE "IMPERVIOUS FILL" MATCHING EXISTING LEVEE FILL MATERIAL AS CONSTRUCTED. FILL MATERIAL TO BE COMPACTED BY USUAL METHODS FOR ROLLED FILL EMBANKMENT, USING 6 PASSES OF A SUITABLE SHEEPSFOOT ROLLER ON 8 INCH (UNCOMPACTED THICKNESS) LIFTS. CONTRACTOR SHALL BE REQUIRED TO AERATE OR ADD MOISTURE TO THE FILL, AS NECESSARY, TO OBTAIN MAXIMUM COMPACTION OF THE FILL MATERIAL FOR THE COMPACTIVE EFFORT EXPENDITURE.
- 2.) PROPOSED LANDSCAPING OTHER THAN GRASS, I.E. TREES, BUSHES, SHRUBS, ETC. SHALL BE PLANTED IN CONTAINERS OR PLANTERS. ALL LANDSCAPING SUBJECT TO THE CITY OF LAWRENCE APPROVAL.
- 3.) EROSION CONTROL MEASURES SHALL BE EMPLOYED TO ENSURE SURFACE DRAINAGE DOES NOT ADVERSELY IMPACT THE TOP OF THE LEVEE.
- 4.) GREENSPACE, TRENCH GRATES, OR OTHER MEASURES SHALL BE EMPLOYED TO PREVENT TRASH, DEBRIS, ETC. FROM DISCHARGING IN TO THE KANSAS RIVER.
- 5.) MAINTENANCE AND ACCESS "ROADWAY" SHALL BE ADEQUATELY DESIGNED TO SUPPORT FIRE DEPARTMENT EMERGENCY VEHICLES.

LEGEND

- EXISTING STABILITY BERM FILL PER DEPT. OF ARMY OPERATIONS & MAINTENANCE MANUAL RECORD DRAWINGS, MAY 1967.
- SWALE ARROW
- PROPERTY LINE
- BASE FLOOD ELEVATION
- EXISTING TOE-OF-SLOPE (824.00)
- BUILD TO LINE
- PERMANENT LEVEE RIGHT OF WAY
- PROPOSED VACATED R.O.W. AREA

AREAS WITHIN 100' OF THE TOE OF LEVEE (824.00) EXTENDING TO ELEVATION 823.00

- 1.) ANY EXCAVATION PENETRATION OR EXPLORATION HOLE WHICH EXTENDS BELOW SURFACE OF THE STABILITY BERM OR THE NATURAL SOIL BLANKET BETWEEN THE STABILITY BERM AND THE STABILITY PROTECTION LINE SHALL BE BACKFILLED WITH SOIL OF AN IMPERVIOUSNESS SIMILAR TO THAT EXCAVATED AND SHALL BE COMPACTED TO A MINIMUM NINETY-FIVE (95%) PERCENT OF STANDARD DENSITY (A.S.T.M. D-698 OR A.A.S.H.T.O. T-99-57)
- 2.) SMALL SHALLOW DITCHES OR SWALES OF LESS THAN TWO (2') IN DEPTH ARE PERMITTED EVEN IF THEY PENETRATE THE SURFACE OF THE STABILITY BERM.
- 3.) ADDITIONAL FILL OVER AND ABOVE THE SURFACE OF THE STABILITY BERM IS PERMISSIBLE AT ANY TIME.
- 4.) FOR ANY EXCAVATION, STRUCTURE OR BUILDING FOUNDATION THAT DOES NOT EXTEND BELOW THE SURFACE OF THE STABILITY BERM THERE ARE NO CONSTRUCTION RESTRICTIONS.
- 5.) ALL IMPROVEMENTS IN AREAS DEPRESSED BELOW THE SURFACE OF THE STABILITY BERM SUCH AS BASEMENTS, UNDERGROUND FUEL TANKS, DEPRESSED LOADING DOCKS AND RAMPS AND DEPRESSED BOLLER ROOMS, SHALL BE DESIGNED AND CONSTRUCTED TO COMPENSATE FOR APPLICABLE UPLIFT CONDITIONS AND GEOTECHNICAL UNDERSEEPAGE CONDITIONS.
- 6.) PERIPHERAL FOUNDATION DRAINS AND DRAINS INSTALLED FOR RELIEF OF SEEPAGE WATER OR HYDROSTATIC HEAD BEHIND STRUCTURE WALLS SHALL HAVE FILTER MATERIAL AROUND THE LINES WHICH IS DESIGNED TO PREVENT INFILTRATION OF SOIL.
- 7.) ALL TRENCHES, DITCHES OR EXCAVATION RUNNING APPROXIMATELY PARALLEL TO THE LEVEE AND WITHIN ONE HUNDRED FIFTY (150') FEET LANDWARD OR RIVERWARD OF THE LEVEE CENTERLINE SHALL REQUIRE THE SPECIFIC APPROVAL OF ALL APPROPRIATE AGENCIES AND AUTHORITIES HAVING JURISDICTION OVER THE PROPOSED CONSTRUCTION.
- 8.) CONSTRUCTION ON THE LEVEE AND CONSTRUCTION OF PITS AND WELLS TO INCLUDE RELIEF WELLS IS PERMISSIBLE BUT SHALL REQUIRE THE SPECIFIC APPROVAL OF ALL APPROPRIATE AGENCIES AND AUTHORITIES HAVING JURISDICTION OVER THE PROPOSED CONSTRUCTION.

FLOOD ELEVATIONS:

| | |
|---------------------|----------------|
| 500 YEAR HW ELEV. = | 837.00 |
| 100 YEAR HW ELEV. = | 828.00-829.00* |
| 50 YEAR HW ELEV. = | 824.00 |
| 10 YEAR HW ELEV. = | 818.00 |

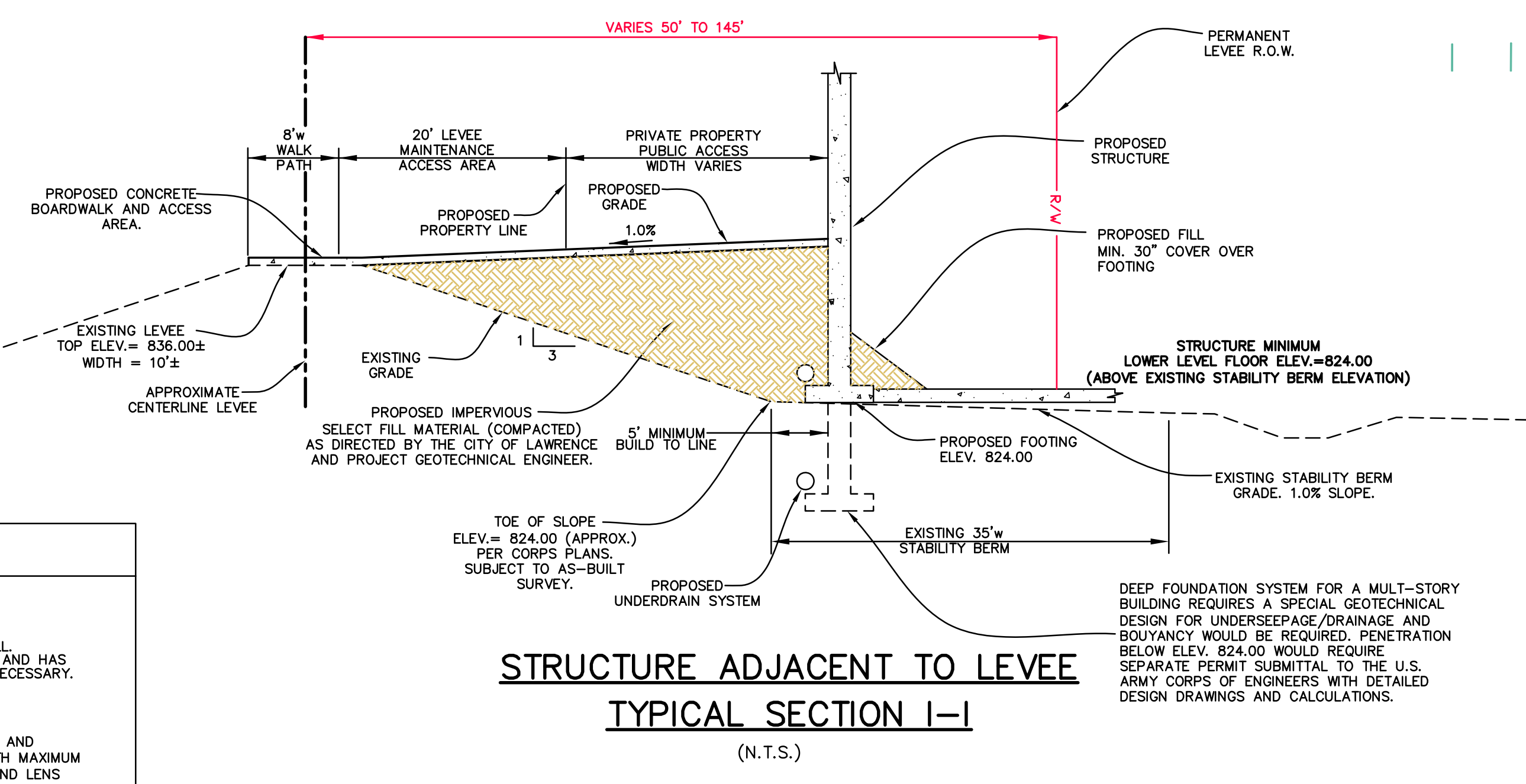
ELEVATIONS PER FLOOD PROFILES, PANEL 24P.
* ELEVATIONS PER F.I.R.M. PANEL NO. 20045C 0036 C WITH EFFECTIVE DATE OF NOVEMBER 7, 2001. ZONE 'X' NON-SHADED.

GENERAL NOTES:

- 1.) BOUNDARY AND TOPOGRAPHIC SURVEY BY OTHERS. INFORMATION SHOWN SUBJECT TO AN ALTA/ACSM SURVEY.
- 2.) ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- 3.) SITE IS LOCATED IN ZONE 'X' AREAS OF 500 YEAR FLOOD; AREAS OF 100 YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100 YEAR FLOOD AS INDICATED IN THE FLOOD INSURANCE RATE MAP (FIRM), OF DOUGLAS COUNTY, KANSAS, AND INCORPORATED AREAS, PANEL 0036, MAP NO. 20045C0036 C WITH AN EFFECTIVE DATE OF NOVEMBER 7, 2001.

EXISTING LEVEE SECTION TABLE

| | |
|-------------|---|
| SECTION 'G' | STA: 266+00 TO 306+50 DESCRIPTION: APPLIES TO REACH PARALLELING RAILROAD EMBANKMENT. LANDWARD BERM TIES TO THE RAILROAD FILL. RAILROAD EMBANKMENT WILL SERVE AS STABILITY BERM AND HAS SUFFICIENT WIDTH TO MAKE AN UNDERSEEPAGE BERM UNNECESSARY. |
| SECTION 'A' | STA: 306+50 TO 316+00 DESCRIPTION: BASIC LEVEE SECTION WITH 10 FOOT CROWN AND 1 ON 3 SIDE SLOPES. ZONE ROLLED FILL EMBANKMENT WITH MAXIMUM HEIGHT OF 14 FEET AND AVERAGE HEIGHT OF 11 FEET. SAND LENS CUTOFF AND INSPECTION TRENCH REQUIRED OVER PORTION OF REACHES. STABILITY BERM NO REQUIRED. |
| SECTION 'E' | STA: 316+00 TO 330+90 DESCRIPTION: SECTION VERY SIMILAR TO SECTION 'C', BUT INCORPORATES A LANDSIDE FILL AREA OVER PART OF THE REACH. A CUTOFF IS PROPOSED. |
| SECTION 'C' | STA: 206+00 TO 266+00 (NOT ON SITE) DESCRIPTION: SECTION USED WHERE POOR FOUNDATION AND/OR GREATER HEIGHT THAN IS APPLICABLE TO SECTION 'A' REQUIRES BOTH LANDSIDE AND RIVER-SIDE STABILITY BERMS. A CUTOFF OR INSPECTION TRENCH IS REQUIRED OVER PORTIONS OF VARIOUS REACHES AND UNDERSEEPAGE BERMS ARE PROPOSED THROUGH REACHES INDICATED ON SCHEDULE ON PLATE 22. |



1.) 06/16/10 ADD PERMANENT R.O.W. AS PROVIDED BY US ARMY CORP O&M MANUAL

NORTH LAWRENCE PROJECT
PRELIMINARY PLAN

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DATE: 11/06/09
CHECKED BY: G.M.S.
DATE: 11/06/09

209-4391

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