STATE OF ILLINOIS PROPOSED STRUCTURE (SYMM. ABOUT) **DEPARTMENT OF TRANSPORTATION** PROPOSED PRECAST -PROPOSED T-TYPE CONCRETE BOX WINGWALL (TYP.) CULVERT 6'x6' STATION 45+20 (PROJECT) BUILT 200 BY STATE OF ILLINOIS 2'-0" (TYP.) ROUTE 349 SEC. 16RS-6 -LIMITS OF FINAL GRADE LOADING HS20 STRUCTURE 2:1 MAX SLOPE STR, NO. 047-0300 EXCAVATION NAME PLATE 060 See Std. 515001 COURSE AGGR. LIMITS OF REMOVAL BACKFILL (SPEC.) EL.=690.00-GEOTECH. FABRIC FOR AND DISPOSAL OF GROUND STABILIZATION UNSUITABLE MATERIAL DOWNSTREAM END ELEVATION FOX: -10" TH. CLASS D, SEE CIVIL DRAWINGS RIVER TYPE IV - 156 SQ. YD. FOR SLOPES US RT. 30 STEEL PLATE BEAM 17'-6" COURSE AGGREGATE -PROPOSED GUARD RAIL, LOCATION SKETCH BACKFILL (SPECIAL) STRUCTURE ATTACHED TO ALL BACKFILL MATERIAL TRUCTURE, SEE SHALL BE COURSE AGGR. STANDARD 630101-07 BACKFILL (SPEC.) -CASE IV FOR INFO FINAL -2'-0" TYP. *MATCH EXISTING SUBGRADE INV. ELEVATION *MATCH EXISTING -INV. ELEVATION ** SLOPE AS RIPRAF PER GEOTECH RIPRAF REPORT LIMITS OF EARTH LIMITS OF STRUCTURE COURSE AGGR. 2'-0" (TYP.) FXCAVATION EXCAVATION BACKFILL (SPEC.) EL.=690.00-LIMITS OF REMOVAL AND GEOTECH. FABRIC FOR-GEOTECH, FABRIC FOR (TYP.) LIMITS OF REM. & DISP. DISPOSAL OF UNSUITABLE MATERIAL GROUND STABILIZATION GROUND STABILIZATION EL,=690.00 OF UNSUITABLE MAT. LONGITUDINAL SECTION * CONTRACTOR SHALL FIELD VERIFY EXISTING INVERT SECTION THROUGH CULVERT, LOOKING NORTH ELEVATION AT EACH END PRECAST BARREL BEFORE REMOVING EXISTING © US RT. 30 WATER DIVERSION -SYSTEM, AS PER BEGIN STA. 44+91.50 SECTION 540. EL. = 705.64 (SEE NOTE 3) STOP RIPRAP AT R.O.W. LINE IF NEEDED STONE RIPRAP CLASS A4 (TYP.) 3'-0" REDDING FILTER FLOW SECTION THRU RIPRAP 0.36% 0000 45+20 705.57 12'-0" 12'-0" END STA. 45+48.50 CUI VERT 24'-7" PAVEMENT EL. = 705.52 STA. 45+20.00 EL. = 705.57 PROFILE GRADE 35'-0" BK. TO BK. HEADWALLS (ALONG € ROADWAY) (TYP.) PLAN DESIGNED - WHE STATE OF ILLINOIS REVISED CHECKED -WHE REVISED

DATE

01/19/2009

REVISED

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GENERAL NOTES

- EXISTING STRUCTURE: 047-0200 NOT SALVAGEABLE. THE NEW STRUCTURE NUMBER IS 047-0300.
- 2. THE PROPOSED PRECAST CONCRETE BOX CULVERT SHALL BE DESIGNED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OF AASHTO M273. COST IS INCLUDED IN PRECAST CONCRETE BOX CULVERT 6'x6' ITEM.
- 3. FLOW OF THE CREEK UNDER US ROUTE 30 IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY PLACING A TEMPORARY STREAM DIVERSION AT THE UPSTREAM END OF THE BOX CULVERT/ WINGWALLS AND TEMPORARILY PUMPING OR OTHERWISE CONVEYING THE STREAM FLOW THROUGH THE WORK ZONE. THE DESIGN AND CONSTRUCTION OF THE TEMPORARY DIVERSION SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THE COST SHALL BE INCLUDED IN CONCRETE BOX CULVERTS ITEM. THE TEMPORARY STREAM DIVERSION PLAN TO BE USED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.
- LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER PRECAST BOX SECTIONS ARE IN PLACE.
- 5. THE INFORMATION SHOWN IN THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE EXISTENCE, TYPE, SIZE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AS MAY BE NECESSARY TO AVOID CONFLICT WITH CONSTRUCTION OPERATIONS AND/OR DAMAGE TO THE UTILITY.
- THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED WITH PRECAST CONCRETE BOX CULVERT 6'x6'.
- 7. THE CONTRACTOR IS TO PROTECT AND MAINTAIN ALL TREES WITHIN AND ADJACENT TO THE WORK ZONE FOR THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED WITH PRECAST CONCRETE BOX CULVERT 6'x6'.
- 8. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60. SEE SPECIAL PROVISIONS.
- 9. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- 10. THE LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL EXTEND VERTICALLY FROM THE BOTTOM OF THE BOX CULVERT DOWN TO ELEVATION 690.00 AND HORIZONTALLY TO VERTICAL LIMITS LOCATED 2 FEET OUTSIDE THE PERIMETER OF THE BOX CULVERT AND WINGWALL FOOTINGS. ONCE COARSE AGGREGATE BACKFILL (SPECIAL) IS REPLACED UP TO THE BOTTOM ELEVATION OF THE BOX CULVERT, STRUCTURE EXCAVATION WILL OCCUR IN THE NEW FILL FOR THE CUTOFF WALLS AND WINGWALLS. THE SECOND PLACEMENT OF STRUCTURE BACKFILL IN THESE AREAS WILL BE INCLUDED IN THE PAY QUANTITY FOR COARSE AGGREGATE BACKFILL (SPECIAL).

DESIGN LOADING

HS20-44 AND ALTERNATE MILITARY LOADING AND ALLOWANCE FOR 50 P.S.F. FUTURE WEARING SURFACE

DESIGN SPECIFICATIONS

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002

DESIGN STRESSES

FIELD UNITS f'c = 3,500 psi fy = 60,000 psi (REINFORCEMENT) PRECAST UNITS f'c = 5,000 psi

fy = 65,000 psi (WELDED WIRE FABRIC) fy = 60,000 psi

(REINFORCEMENT)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1 Horizontal Bedrock Acceleration Coefficient (A) = 3.5%g Site Coefficient (S) = 1.0

DEPARTMENT OF TRANSPORTATION

TOTAL SHEE SHEETS NO. SECTION COUNTY GENERAL PLAN, ELEVATION AND INDEX 16RS-6 US ROUTE 30 - SN 047-0300 CONTRACT NO. 60A98 SCALE: 1/8" = 1'-0" SHEET NO. OF SHEETS STA. TO STA.