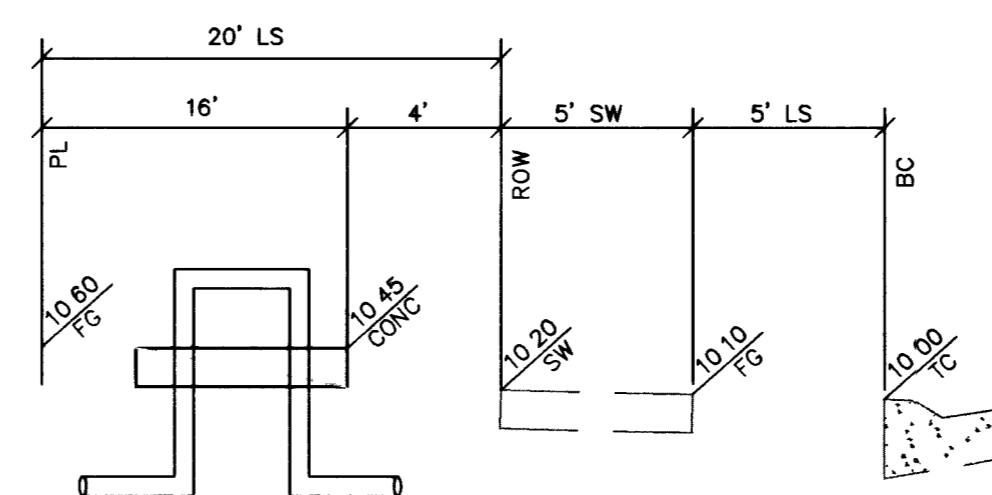
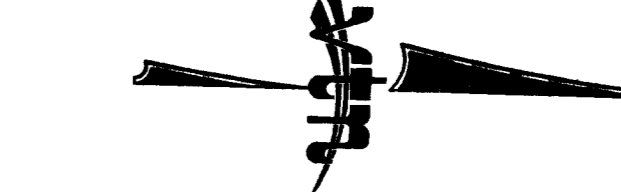


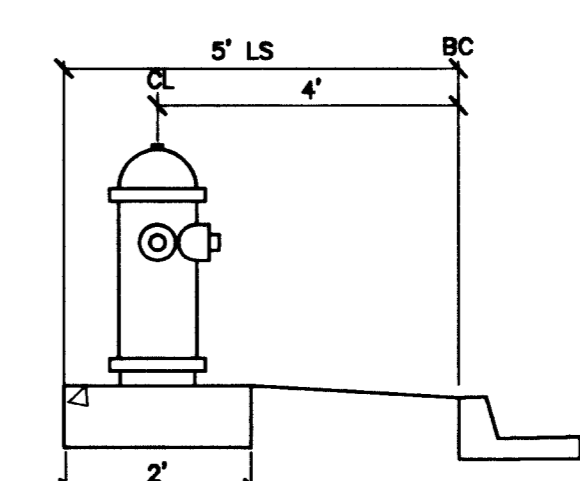
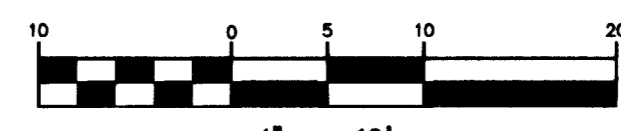
**PROFILE**  
NOT TO SCALE



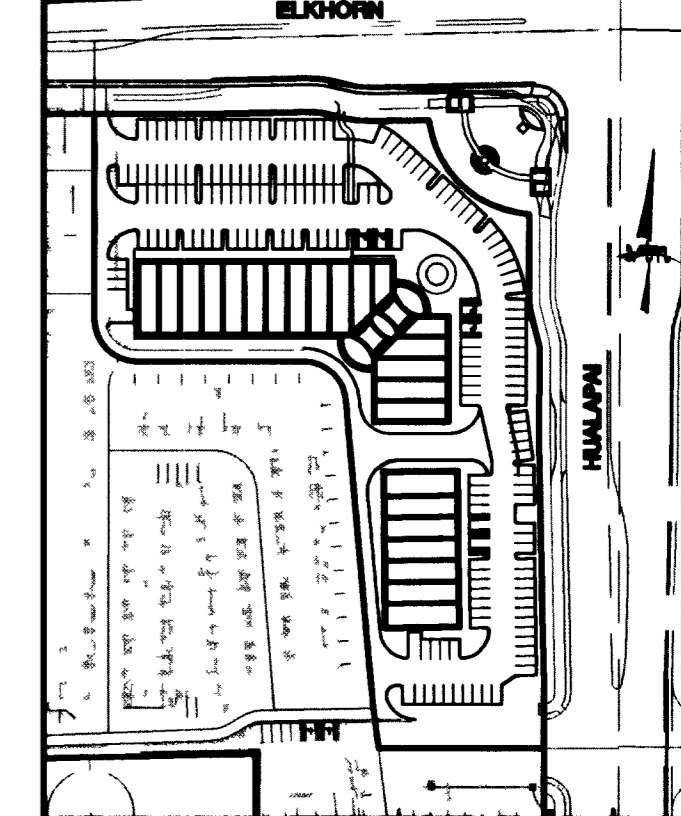
**PROFILE**  
NOT TO SCALE



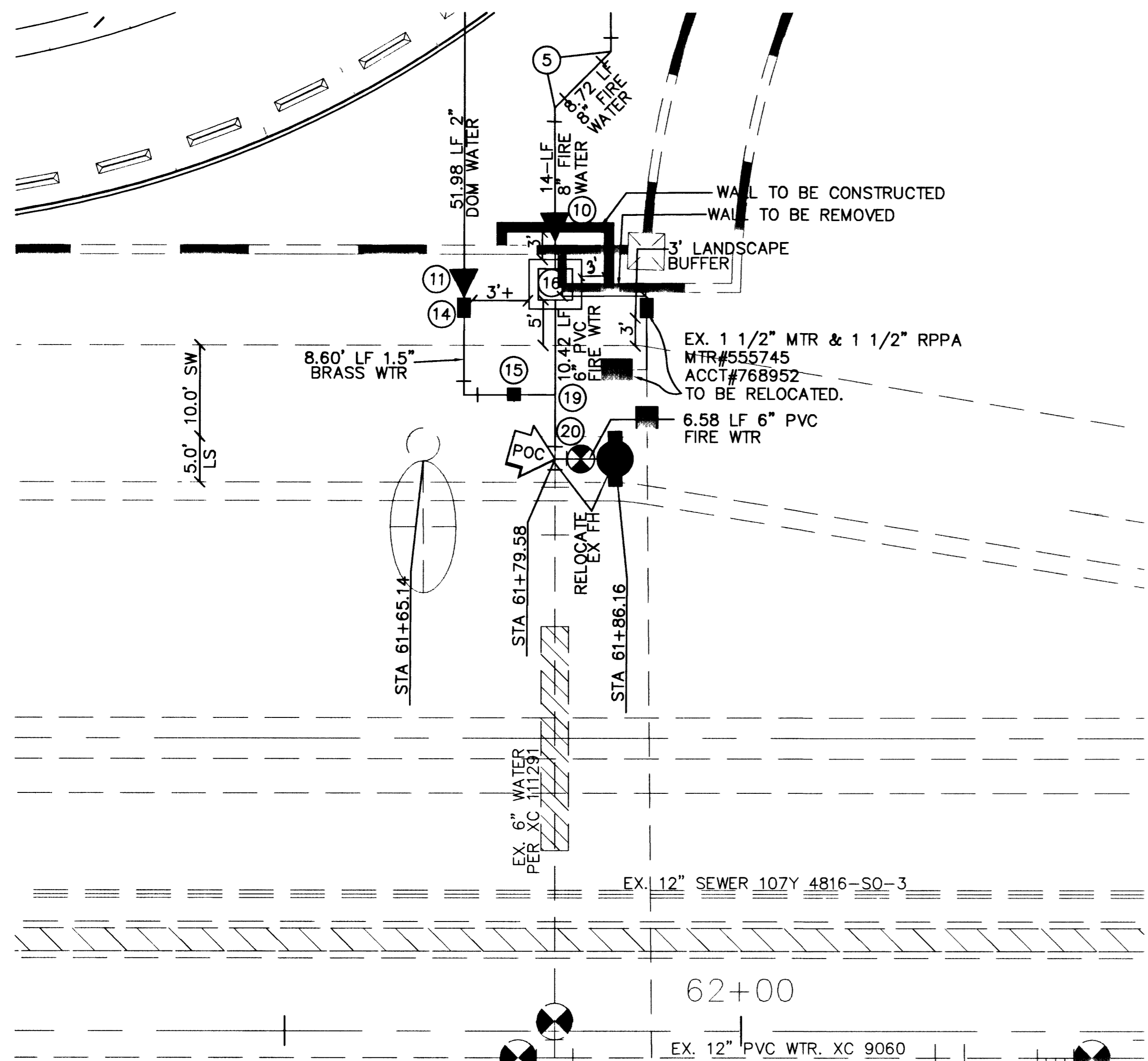
GRAPHIC SCALE



**FIRE HYDRANT DETAIL**

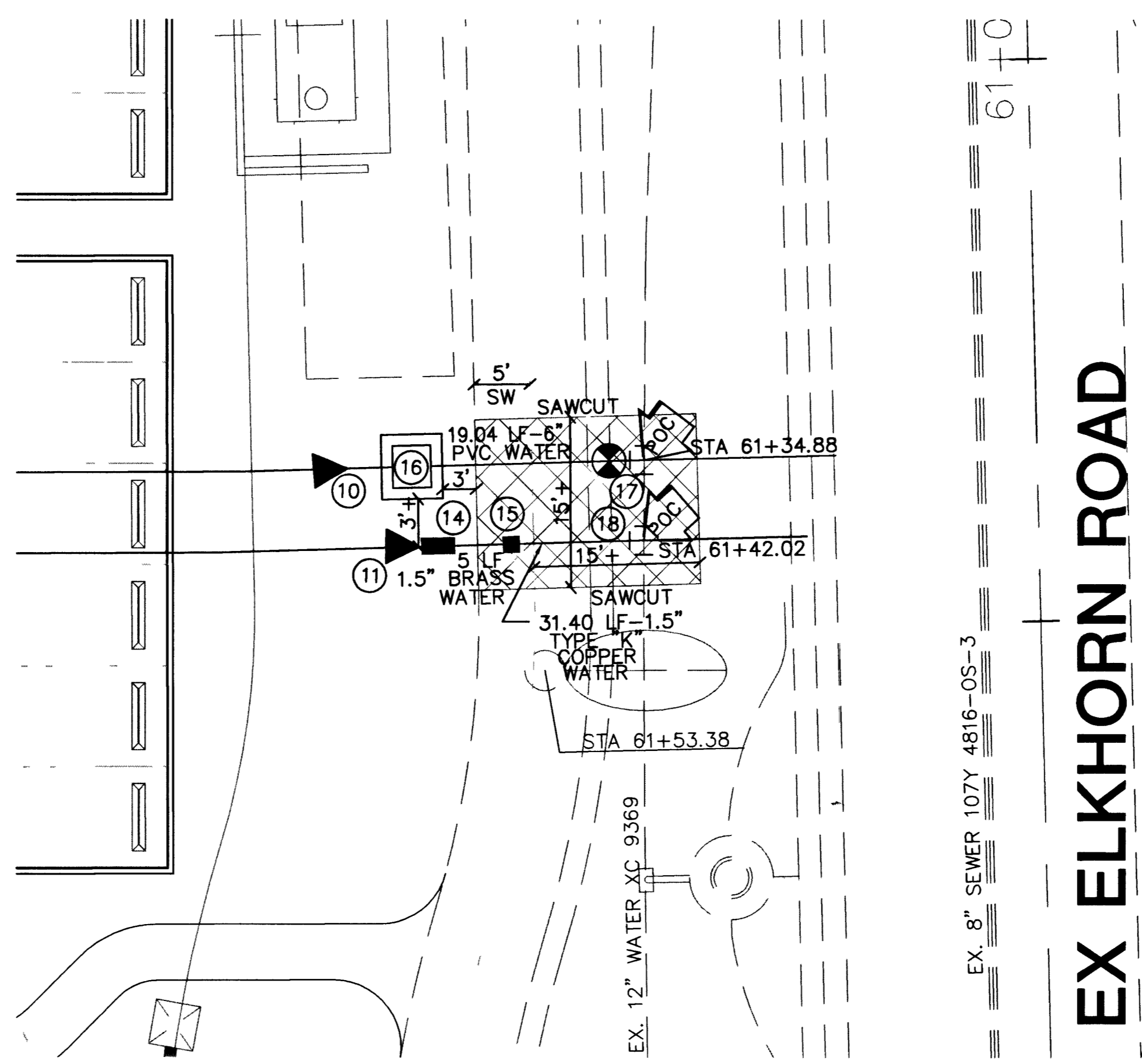


**KEY MAP**  
N.T.S.



**EX HUALAPAI WAY**

**DETAIL "A"**  
SCALE 1"=10'



**DETAIL "B"**  
SCALE 1"=10'

**LEGEND**

- WATER**
- ① 2"x2" TEE
  - ② FIRE HYDRANT ASSEMBLY (INCLUDES PIPES, VALVE, TEE, & RISER) PER UDACS PLT 7
  - ③ 8" 90° BEND
  - ④ 8"x8" TEE
  - ⑤ 8" 45° BEND
  - ⑥ 8" 22.5° BEND
  - ⑦ 8" 5° BEND
  - ⑧ 2" 90° BEND
  - ⑨ 8" STUB & CAP
  - ⑩ 8"x8" REDUCER
  - ⑪ 2"x1.5" REDUCER
  - ⑫ 2" 5° BEND
  - ⑬ 2" 45° BEND
  - ⑭ 1.5" R.P.P.A. PER UDACS PL# 11A
  - ⑮ 1.5" METER PER UDACS PL# 1D
  - ⑯ 6" D.C.D.A. PER UDACS PL# 11C
  - ⑰ 12"x8" TAPPING SLEEVE W/ 8" TAPPING VALVE (PER UDACS PLT 22)
  - ⑱ 12"x1.5" SERVICE SADDLE (PER UDACS PLT 1D)
  - ⑲ 6"x1.5" SERVICE SADDLE (PER UDACS PLT 1D)
  - ⑳ 8"x8" TEE AND 8" GATE VALVE

- 8" PVC WATER
- 6" PVC WATER
- 2" PVC WATER

**SEWER CONTRIBUTIONS**  
AVERAGE DAILY FLOW = 0.00084 MDG  
PEAK FLOW = 0.00294 MDG

**FIRE DEPARTMENT APPROVAL**

APPROVED BY: *[Signature]* DATE: 5-14-08  
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.

**LAS VEGAS VALLEY WATER DISTRICT APPROVAL**

APPROVED BY: *[Signature]* DATE: 5-14-08  
LAS VEGAS VALLEY WATER DISTRICT PROJECT # 114675

**BASIS OF BEARINGS**

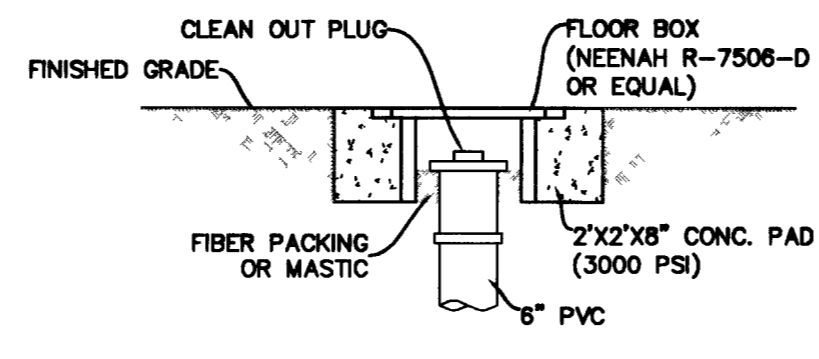
THE BASIS OF BEARINGS FOR THIS PROJECT IS NORTH 00°08'16" EAST BEING THE EAST LINE OF THE NORTHWEST QUARTER (NE 1/4) OF THE SECTION 24, TOWNSHIP 19 SOUTH, RANGE 58 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN ON A RECORD OF SURVEY ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE IN FILE 123 AT PAGE 32.

**PROJECT BENCHMARK**

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
CLARK COUNTY VERTICAL CONTROL: 1000-686  
NAVD88 ELEVATION: 787.794 METERS (2584.62 FEET)  
RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CYLINDER, LOCATED 25' SOUTH & 50' EAST OF GRAND CANYON DRIVE AND RED COACH AVENUE, 1' WEST OF ELECTRICAL VAULT.

**CITY OF LAS VEGAS BENCHMARK**

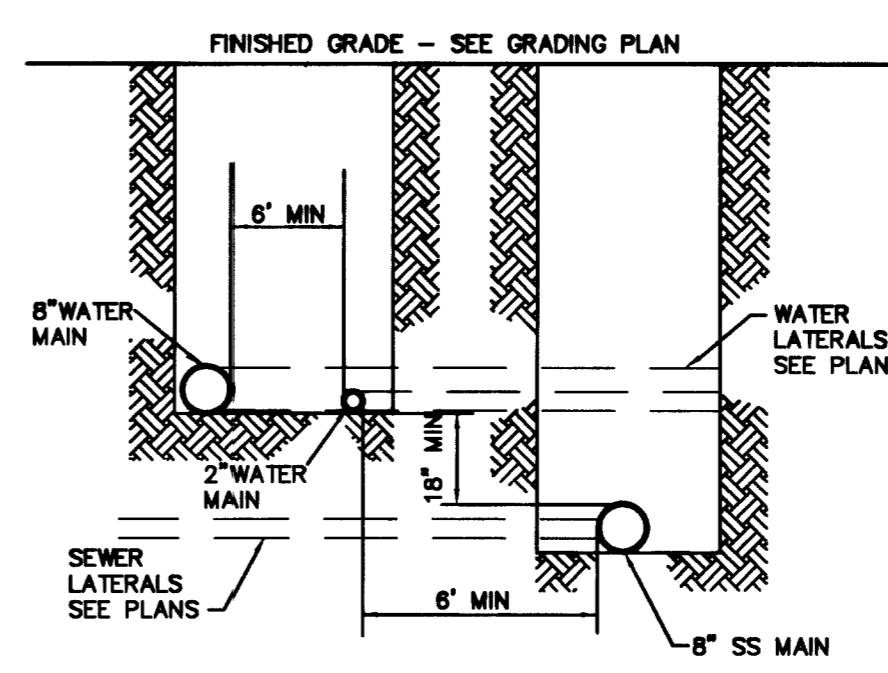
DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
CITY OF LAS VEGAS BENCHMARK: BLV99-135ES  
NAVD88 ELEVATION: 869.606 METERS (2853.03 FEET)  
RIVET AND PLATE IN CONCRETE CYLINDER NW CORNER OF HUALAPAI AND ELKHORN  
NOTE: ADD 0.34' TO ABOVE CITY OF LAS VEGAS BENCHMARK BLV99-135ES TO MATCH ORIGINAL PROJECT BENCHMARK. CLARK COUNTY BENCHMARK 1000-686 (2584.62 FEET) AS SHOWN ON RECORD OF SURVEY FILE 124 PAGE 84.



**RELOCATION OF FIRE HYDRANTS (Extension of Existing Lateral)**  
THE CONTRACTOR SHALL REMOVE AND RELOCATE BOTH THE UPPER AND LOWER BARRELS OF THE EXISTING FIRE HYDRANT(S) WHERE SHOWN, EXTEND THE EXISTING LATERAL AS REQUIRED, AND REINSTALL SUCH HYDRANT(S) AT THE NEW LOCATION(S) INDICATED. FIRE HYDRANTS SHALL BE TESTED PRIOR TO AND AFTER RELOCATION UNDER THE DIRECTION OF THE DISTRICT, TO ENSURE QUALITY. INSTALLATION SHALL BE IN ACCORDANCE WITH UDACS PLATE 7. LATERALS MADE OF UNAPPROVED MATERIALS SHALL BE REPLACED FROM THE MAIN TO THE FIRE HYDRANT. RELOCATIONS WHERE THE LATERAL CANNOT BE EXTENDED SHALL BE TREATED AS NEW INSTALLATIONS.

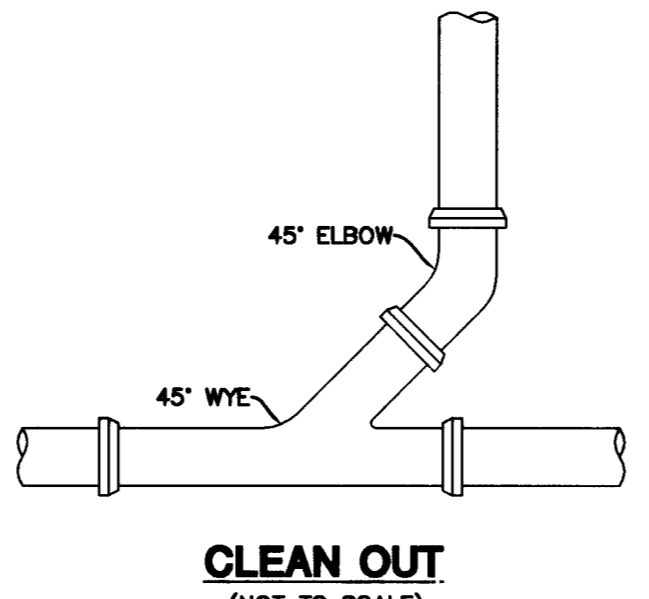
**REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 1.5"**  
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PL# 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

**DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) (2) 8"**  
THE DOUBLE CHECK DETECTOR ASSEMBLY(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PL# 11C. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) SO AS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.



**ON-SITE WATER & SEWER TRENCH DETAIL**

NOTE: PIPE INSTALLATION IN



**CLEAN OUT**  
NOT TO SCALE

**ENGINEER DISCLAIMER NOTE**

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

**NOTE**  
ALL ON-SITE SEWER TO BE PRIVATE.

**NOTE**  
ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.12.040

**WATER MAIN JOINT DEFLECTION (PVC 4" - 24")**

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.06.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED

FSN 050

Call before you Dig  
811 OR 1-800-227-2800

Call before you Overhead  
1-702-227-2929

Call before you Underground  
1-702-455-7511  
CLARK COUNTY TRAFFIC OPERATIONS AND  
1-702-229-8611  
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

**GREENSTREET PROPERTIES**  
CITY OF LAS VEGAS  
2727 SOUTH RAINBOW BOULEVARD  
LAS VEGAS, NEVADA 89148-5148  
PH. (702) 633-7550 FAX (702) 362-2587 WEB WWW.VTNVY.COM  
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

**UTILITY DETAIL PLAN**  
**GREENSTREET PROVIDENCE PHASE 1**

DRAWN BY: MM  
DESIGNED BY: MM  
CHECKED BY: MM  
PROJECT NO: 8892

SCALE: 1"=10' HORIZ. N/A VERT.

DATE: 8-07

SHEET  
**UD1**  
5 OF 10 SHEETS  
DRAWING NO.