



I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT FOR THE SUBJECT PROJECT.

II. PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE PAVING OF AN UNPAVED PARKING LOT. THE DEVELOPED RUNOFF FROM THE PROJECT WILL BE DIVERTED TO COAL PLACE SE AS OPPOSED TO DRAINING ONTO THE EXISTING RESIDENTIAL LOT THAT LIES IMMEDIATELY WEST OF THE SITE.

III. BACKGROUND DOCUMENTS & RESEARCH

IV. EXISTING CONDITIONS

V. DEVELOPED CONDITIONS

VI. GRADING PLAN

VII. CALCULATIONS

VIII. CONCLUSION

1. APPARENT DOWNSTREAM CAPACITY
2. DEVELOPMENT OF AN EXISTING SITE WITHIN AN INFILL AREA
3. NEGLIGIBLE INCREASE IN THE PEAK DISCHARGE OF RUNOFF
4. NO ADVERSE IMPACT ON DOWNSTREAM CONDITIONS
5. THE EXISTING DRAINAGE PATTERN WILL BE IMPROVED
6. DRAINAGE ONTO ADJACENT PRIVATE PROPERTY WILL BE MITIGATED

CALCULATIONS

SITE CHARACTERISTICS

1. PRECIPITATION ZONE = 2
2. $P_{6,100} = P_{300} = 2.35$
3. TOTAL PROJECT AREA (A_T) = 66000/0.15 SF/AC
4. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
C	68000/0.15	100

5. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
C	1060/0.02	16
D	5540/0.13	84

5. EXISTING CONDITION

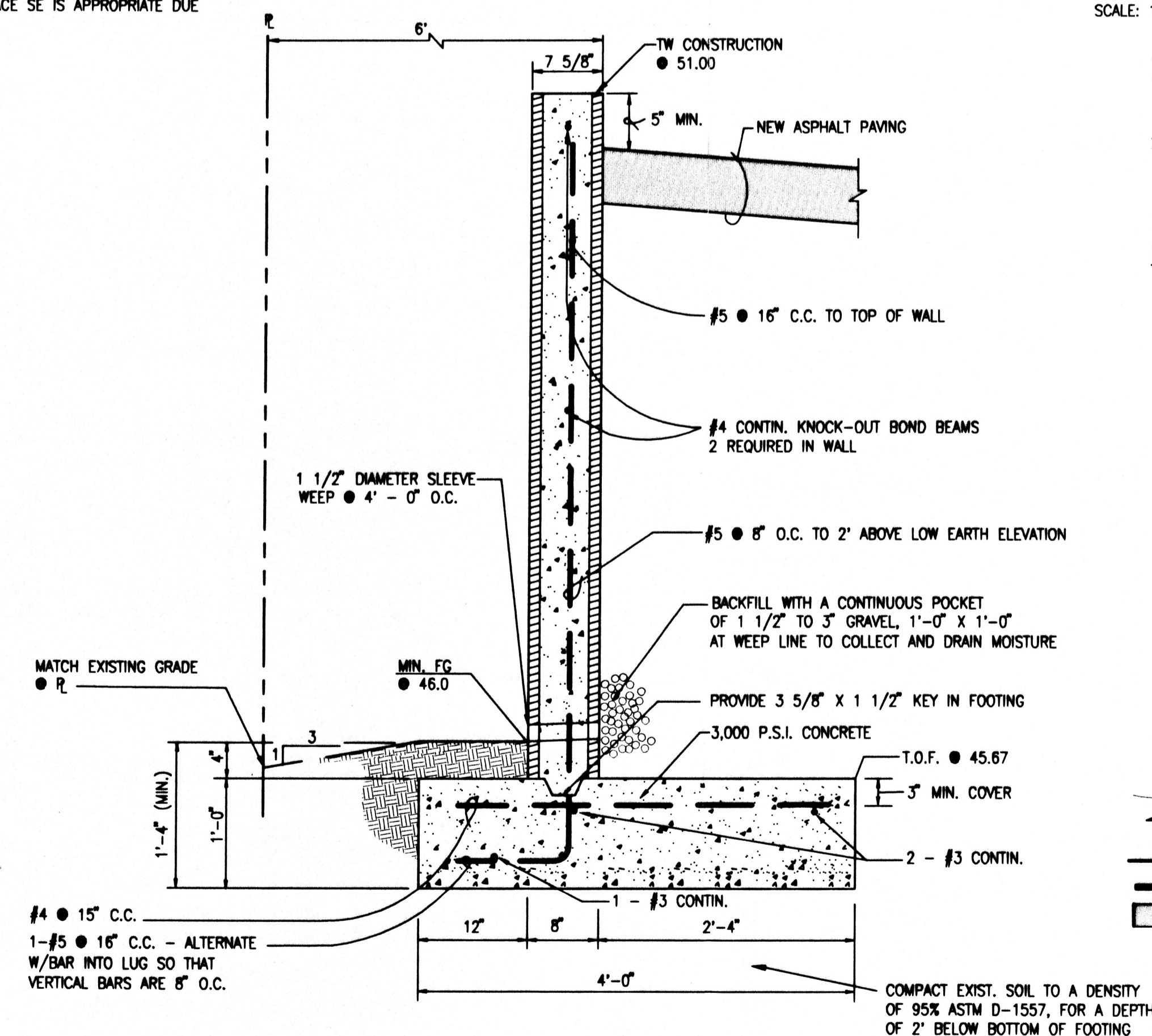
1. VOLUME
 $E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$
 $E_w = 1.13 \text{ IN}$
 $V_{100} = E_w / (12) A_T = 620 \text{ CF}$

1. PEAK DISCHARGE
 $Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
 $Q_p = Q_{1m} = 3.14(0.15) = 0.5 \text{ CFS}$

7. DEVELOPED CONDITION

1. VOLUME
 $E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$
 $E_w = 1.13 (0.16) + 2.12 (0.84) = 1.96 \text{ IN}$
 $V_{100} = E_w / (12) A_T = 1080 \text{ CF}$

8. COMPARISON
- $\Delta V_{100} = 1080 \text{ CF} - 620 \text{ CF} = 460 \text{ CF} \text{ (INCREASE)}$
- $\Delta Q_{100} = 0.7 \text{ CFS} - 0.5 \text{ CFS} = 0.2 \text{ CFS} \text{ (INCREASE)}$



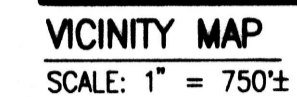
SECTION A-A
SCALE: 1" = 1'

CONSTRUCTION NOTES:

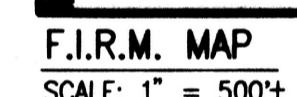
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND RECOMMENDATIONS.
5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITY LINES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
7. REFER TO ARCHITECTURAL SITE PLAN FOR PARKING LOT LAYOUT AND PAVING DETAILS.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.



SCALE: 1" = 750'±



SCALE: 1" = 500'







PROJECT BENCHMARK

ACS CONTROL STATION/BENCH MARK "2-K-15",
ELEVATION = 5133.97 FEET (NGVD 1929)

T.B.M.

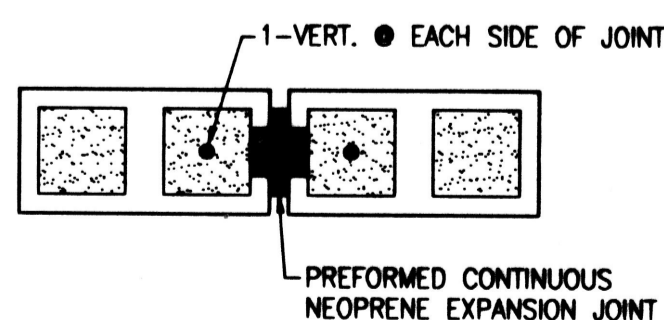
TOP OF BACK OF CURB ELEVATION LOCATED AT THE NNW CURB
RETURN AT THE INTERSECTION OF MESA STREET S.E. AND COAL
PLACE S.E. AS SHOWN ON THE DRAWING
ELEVATION = 5150.98 FEET

LEGEND

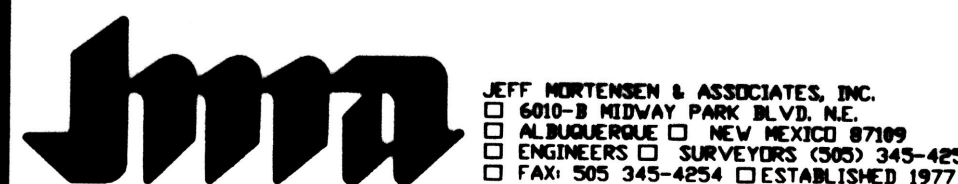
- LEGEND
- | | |
|---|----------------------------------|
| ● DUS | UNDERGROUND UTILITY SPOT |
| ● LSW | UNDERGROUND US WEST UTILITY SPOT |
|  | CONIFEROUS TREE |
|  | DECIDUOUS TREE |
| ● FH | FIRE HYDRANT |
| ● HW | WATER VALVE |
| (U) | GAS METER |
| ● POST | UNIDENTIFIED MANHOLE |
|  | GUARD POST |
| ● CT | TELEPHONE RISER |
| ● CB | CTV RISER |
|  | ELECTRICAL BOX |
|  | CLEANOUT |
| ● FD | FLOOR DRAIN |
| ● DI | DROP INLET |
| ● D | STORM MANHOLE |
| ● TSI | TRAFFIC SIGNAL LIGHT |
| ● WM | WATER METER |
| △ GM | GAS METER |
| ● TS | SANITARY SEWER MANHOLE |
| ● TS | TRAFFIC SIGN |
| ● CTV | CABLE TV RISER |
| □-● W/L | POWER POLE W/LIGHT |
| ○ TP | POWER POLE |
| ○ LT | LIGHT POLE |
| ✕ SPOT | ELEVATION SPOT |
| — | EXISTING CONTOUR |
| ● ... | PROPOSED DIRECTION OF FLOW |
| ● 50.15 | PROPOSED SPOT ELEVATION |
| 50 | PROPOSED CONTOUR |
| — | PROPOSED RETAINING WALL |
|  | PROPOSED ASPHALT PAVEMENT |



1. 8"X8"X16" CMU OF UBC STD. 24-4 OR 24-5.
2. USE KNOCK-OUT BOMB BEAM BLOCK AT 4'-0" MAX C.C., VERTICALLY, AND 1 #4 CONTINUOUS.
3. FILL ALL BLOCK VOIDS WITH 3000 PSI CONCRETE.
4. REINFORCING TO BE INTERMEDIATE GRADE STEEL.
fs=20,000 psi
5. IN LIEU OF CONTINUOUS KNOCK-OUT BOMB BEAMS, CONTRACTOR MAY INSTALL DUR-O-WALL REINFORCING EVERY SECOND COURSE.
6. SPICE SHALL BE 40 BAR DIA. MINIMUM FOR VERTICAL BARS. ALL OTHER SHALL BE 20 BAR DIA. MINIMUM.
7. CONCRETE FILL SHALL BE 21 DAYS OLD OR ACHIEVE 70% OF DESIGN STRENGTH PRIOR TO BACKFILLING.
8. INSTALL MASONRY CONTROL JOINTS PER TYPICAL DETAIL AT UNIFORM SPACINGS OF 20' (MIN.) TO 24' (MAX.).



TYPICAL MASONRY CONTROL JOINT DETAIL
SCALE: 1" = 1'-0"



GRADING AND DRAINAGE PLAN

ST. CHARLES BORROMEO OVERFLOW PARKING LOT

DESIGNED BY <u>JGM</u> DRAWN BY <u>JMA</u> APPROVED BY <u>JGM</u>	NO.	DATE	BY	REVISIONS	JOB NO.
					2005.071.1
					DATE 10-2005
					SHEET 1 OF 1