PUBLIC WORKS/HYDROLOGY

G16/D101

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G16/D101

25×10

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 26, 1993

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado NE
Albuquerque, New Mexico 87108

RE: ENGINEER'S CERTIFICATION OF SALVATION ARMY SILVERCREST (G-15/D101), ENGINEER'S STAMP DATED AUGUST 3, 1993

Dear Mr. Weiss:

Based on the information provided on the referenced submittal received August 5, 1993, the plan is acceptable for Certification of Occupancy release.

If you have any questions, please call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
C.E./Hydrology Section

xc: Alan Martinez
File

GA/WP+1145

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

25×10

0000 0000 0967

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SALVATION ARMY SILVERCREST ZONE ATLAS/DRNG. FILE #: G-16/D101

LEGAL DESCRIPTION: TRACT A OF THE LANDS OF THE CHURCH OF

~~CITY ADDRESS:~~ THE NAZARENE, ALBUQUERQUE, NM

ENGINEERING FIRM: C.L. WEISS ENG., INC. CONTACT: CHRIS WEISS

ADDRESS: 1100 ALVARADO N.E. 87110 PHONE: 266-3444

OWNER: THE SALVATION ARMY CONTACT: CHUCK LAKIN

ADDRESS: PO BOX 52177, PHOENIX, AZ 85072 PHONE: (602) 267-4208

ARCHITECT: LESCHER & MAHONEY, INC CONTACT: BOB WATKINS

ADDRESS: 2141 EAST CAMELBACK ROAD, SUITE 100 PHOENIX, AZ 85016 PHONE: (602) 381-8580

SURVEYOR: CARL HARRINGTON, INC. CONTACT: CARL HARRINGTON

ADDRESS: 124 MONROE ST. NE. 87110 PHONE: 266-0660

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 89-117

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

X ENGINEER'S CERTIFICATION

___ RESUBMITTAL

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

X CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

RECEIVED
AUG - 5
HYDROLOGY DIVISION

DATE SUBMITTED: AUGUST 4, 1993

BY: C.L. WEISS ENGINEERING

25 x 10

0000 0000 0968

Weiss Engineering

C.L. Weiss Engineering, Inc
Post Office Box 97
Sandia Park, N.M. 87047

Phone / Fax (505) 281-1800
Alvarado Office (505) 266-3444

August 4, 1993

Mr. Bernie Montoya
Hydrology Department
City of Albuquerque
POB 1293
Albuquerque, NM 87103

RE: ENGINEER'S CERTIFICATION FOR CO FOR SALVATION ARMY SILVERCREST (G-16/D101)

Dear Mr. Montoya,

Enclosed with this letter are two bluelines of the drainage / grading plan revised to show the as-built information and Engineer's Certification. Please call me if you have any questions or comments regarding this submittal for Certificate of Occupancy.

Sincerely,

Bryan J. Bobrick
C.L. Weiss Engineering, Inc.

RECEIVED
AUG - 5 1993
HYDROLOGY DIVISION

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Introduction

Ultra-Rib™ PVC Gravity Sewer Pipe manufactured by Extrusion Technologies, Inc., is a unique combination of PVC pipe technology and innovative engineering design. Ultra-Rib™ brings to the marketplace a cost effective, high quality sewer pipe system. Ultra-Rib™ offers the user a pipe having a seamless uniform cross-sectional wall, radial ribs which are perpendicular to the axis of the pipe and a smooth interior for excellent flow characteristics. Ultra-Rib's™ design enables it to resist earth loads and impact loads normally associated with sewer pipe installation. The outstanding chemical and corrosion resistance of Ultra-Rib™, along with an integral bell and rubber gasket joint make it an excellent choice for sanitary sewer systems and other drainage applications.

Flow Characteristics

The Ultra-Rib™ Process produces a smooth interior pipe. The non-porous PVC together with longer lengths and fewer joints, yield a Manning's "N" value of .009.

Joining System

Pipe Joints:
Ultra-Rib™ PVC Sewer Pipe shall be assembled with an integral bell-and-spigot joint. Ultra-Rib™ features an integral bell with a smooth interior. The pre-tensioned rubber sealing gasket fits around the circumferentially ribbed exterior to provide an excellent seal. Ultra-Rib™ meets the requirements of ASTM D3212 "Specification for Joints and Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals."

ULTRA-RIB™ JOINT

Structural Design

Ultra-Rib™ PVC Sewer Pipe is a flexible conduit which derives its soil load carrying capacity from its flexibility. The interaction of pipe stiffness and soil density in the pipe zone give flexible conduits high effective strength when buried.

Ultra-Rib™ has a minimum uniform pipe stiffness (F/Δy) of 60 psi giving it 30% greater load carrying capacity than standard SDR 35 sewer pipe with a stiffness of 46 psi.

Ultra-Rib™ is a tough and durable pipe with a sturdy rib design capable of withstanding up to 220 ft. lbs. of impact when tested in accordance with ASTM D2444 "Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)."

The relatively thick inner wall of Ultra-Rib™ offers excellent resistance to abrasion, gouging and scarring. Made of tough, durable PVC, normal sewer cleaning equipment is not harmful to Ultra-Rib™. Additionally, Ultra-Rib™ is corrosion resistant and cannot be harmed by sewer gas, acids or fluids found in ordinary sewage.

Field Cutting and Joining

Because the ribs are perpendicular to the axis of the pipe, the pipe can be cut between any rib. The rubber gasket can then be placed between the first and second ribs and the pipe joined together to form a watertight seal. Gasket material shall meet the requirements of ASTM F477 "Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe."

Fittings

Saddles:
Tee and Wye saddles are available for future connections. The saddle is accompanied with a rubber sealing gasket and stainless steel straps for connecting the saddle.

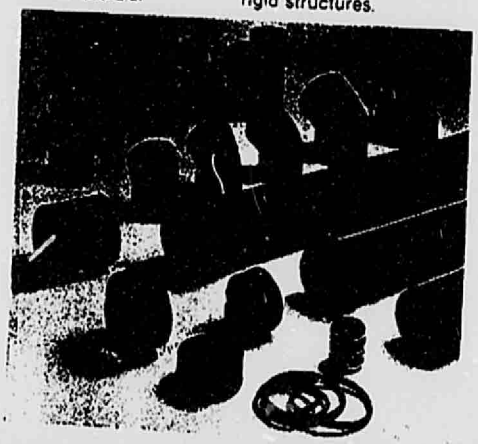
In-Line Fittings:
A complete line of fittings is available with Ultra-Rib sealing dimensions—no adaptors are required. If the customer chooses to use the standard in-line fittings used with ASTM 3034-35 PVC sewer pipe, adaptors to Ultra-Rib™ are available.

Use ASTM 3034-35 PVC Sewer Pipe in 4" or 6" sizes for service laterals.

Repair Couplings:
Sleeve couplings are available for repairs. The sleeve coupling is manufactured to fit the Ultra-Rib™ outside dimensions and is constructed as a straight sleeve with no stop shoulder. This style coupling will facilitate most repair circumstances.

Socket Couplings:
In the event two spigots need to be joined, socket couplings are available. These couplings are very similar to the sleeve couplings except that they employ a stop shoulder at the center of the coupling.

Manhole Couplings:
Manhole couplings are available for manhole tie-ins or connections to other rigid structures.



JUL-31-1991 10:07 FROM Leschner & Mahoney-Phoenix TO 15052569435 P.03

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External Loads

Background

Loads imposed on buried conduits have, in past practice, been calculated by using the Marston load formula. For trench loads, Marston has a formula for rigid pipe and another formula for flexible pipe. It is important to recognize that under identical conditions of bury, the soil load generated on a flexible conduit is less than the load generated on a rigid conduit. The comparative load on a rigid conduit versus the load on a flexible conduit is expressed as the ratio of trench width to the flexible pipe O.D.

By definition, a flexible conduit is one which will deflect before reaching failure.

Marston's formulas for soil loads:
Rigid pipe $W = C_d w B_d^2$
Flexible pipe $W = C_d w B_c B_d$

Where:
W = Load on pipe (lb/lin ft)
C_d = Load coefficient
w = Soil unit weight (lb/ft^3)
B_d = Ditch width (ft)
B_c = O.D. of pipe (ft)

Prism Load

Loads imposed on buried conduits have been calculated by using the Marston load formulas for rigid and flexible pipe. However, it has been determined that the Marston formula for flexible pipe may not determine the maximum long-term load—the "Prism load" formula is more accurate. The "Prism load" is the weight of the column of soil directly above the pipe. Thus, precautions in keeping the trench narrow are unnecessary for the flexible pipe installation. **The important thing is to compact the haunching material from the pipe out to the undisturbed trench walls.**

The maximum long term load can be determined by the prism load for design.

Prism load: $P_v = wH$ (lb/ft^2)

Where:
P_v = Pressure at the top of the pipe due to the weight of the soil (lb/ft^2)
w = Soil unit weight (lb/ft^3)
H = Depth from top of pipe to top of ground (ft)

Note: To convert prism load (lb/ft^2) to lb/linear ft, multiply by the O.D. of the pipe in feet or $W = wHB_c$

Live loads

Live loads imposed on buried conduits from traffic must also be considered in a design and become more important at shallow depths. The combination of soil load and live load must be added together to design for the maximum load as shown in curves above.

The soil load and live load must be added to determine the total external load on a buried conduit. This combined load should be used for design. Figure 1 illustrates the magnitude of soil and live loads separately and also charts the magnitude of the combined or total loads. The curves in Figure 1 apply only for H20 highway loading and a soil weight of 120 lb/cu ft.

H20 Highway Load

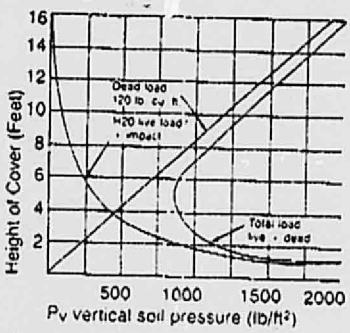

Figure 1

Note: To convert vertical soil pressure to load on pipe—pounds per lineal foot—multiply by O.D. of pipe in ft.

*Live load applied on assumed area of 36" × 40".

At shallow depths of cover—3 feet and less, flexible conduits can deflect and rebound under dynamic loading conditions if the trench width is not sufficiently bridged. Unless special precautions are taken to bridge the trench in shallow installations, the breaking up of flexible road surfaces may result. Therefore, for shallow installations under flexible road surfaces (less than 3 feet), it is recommended that Class I material be used in the pipe zone and up to the road elevation. This recommendation is not meant to conflict with the design engineer's specifications and his specifications will govern.

Pipe Deflection

Deflection is defined as the change in vertical inside diameter of a flexible conduit when subjected to a vertical load. The amount of deflection that will occur in any flexible conduit is a function of three factors:

1. Pipe Stiffness ($F/\Delta y$)
2. Soil Stiffness
3. Load on the pipe

It is important to recognize that flexible conduits perform differently in the ground than they do under laboratory flat plate loading. The interaction of pipe stiffness and soil stiffness combine to give flexible conduits a high effective strength when buried.

Methods for Predicting Pipe Deflection

The most commonly used approach in predicting deflection has been the modified "Iowa Deflection Formula."

Modified Iowa Formula:

$$\Delta y = \frac{D_L K w r^3}{EI + .061\,E' r^3}$$

Where:
Δy = vertical deflection (inches)
D_L = lag factor (1.5 maximum)
K = bedding factor
w = earth load (lb/in.)
r = mean radius (in.)
E = modulus of elasticity (lb/in^2)
I = moment of inertia (in^3)
E' = soil stiffness (lb/in^2)

Although considered a conservative approach, considerable variation in predicted deflection will result depending upon the choice of empirical constants E', K and D_L.

Empirical methods of predicting deflection have evolved in recent years which eliminate the guesswork inherent in the Iowa method. When design is based on actual laboratory test and previous field measurements it is unnecessary to know the actual load acting on the pipe or the soil stiffness. Thus an installation can be designed with a known factor of safety provided enough empirical data is available.

To accommodate the problem of having to establish data for the number of trench widths that are found in the field, the prism load was chosen because it represents the maximum loading condition on a flexible pipe. Time lag to account for future settlement of the backfill can be included by choosing long-term values of deflection.

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Maximum Long-Term Deflection of Ultra-Rib™ Pipe

Figure 2 below was developed to show the maximum long-term deflection for Ultra-Rib™ pipe.

This chart eliminates the guesswork in predicting deflection and gives the design engineer a quick ready reference. This chart is for Ultra-Rib™ Sewer pipe only. The values given for deflection limits are the ultimate long-term deflection that will occur in a particular soil class having a given density (compaction) in the haunching area of the pipe zone for various heights of cover (feet).

Where live loads are not a factor or not involved in the total external load on the pipe, the chart can be used directly to determine the limit of the maximum long-term deflection of the PVC pipe.

Where live loads must be considered, determine, first, the combined total external load on the pipe. Next determine the equivalent prism load (without live load) for the particular pipe size involved. Determine the height of cover (ft.) for the equivalent prism load. Using this height of cover with the bedding class and proctor density, enter the maximum long term deflection chart, Figure 2, to determine the maximum long-term deflection limit.

In working with these charts, it becomes apparent that:

1. Soil density in the pipe zone plays a greater role than soil type in the control of deflection in buried flexible conduits.

2. The amount of deflection is independent of pipe size, providing all pipe sizes are Ultra-Rib™. Note pipe size does not appear in the chart for maximum long-term deflections.

Installation

Foundation and Backfill Design:
Ultra-Rib™ is a flexible conduit having a pipe stiffness (F/Δy) of 60 psi. The soil stiffness (density) in the pipe zone should be designed to limit the deflection of Ultra-Rib™ to 7½%. It is recommended that the design engineer refer to Uni-Bell Uni-B-5 "Recommended Practice for the Installation of PVC Sewer Pipe" or to ASTM D2321 "Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe" or the *Uni-Bell Handbook of PVC Pipe* for design guidelines.

Ultra-Rib™'s 30% greater load-carrying capability provides the user with an additional factor of safety when installed in the same manner as SDR 35 PVC Sewer Pipe. If hydro-hammers are used to prepare the bedding and backfill for the road surface, they should not be used within four feet of the top of the pipe and then only if the pipe zone soil density has been previously compacted to a minimum 85% Standard Proctor density.

Backfill should begin immediately after pipes are joined to prevent unwanted displacement. The height of loose backfill material required to prevent flotation of empty Ultra-Rib™ pipe is equal to three times the pipe diameter.

In traffic areas with dynamic loading and with burials three feet or less, special precautions may be needed to protect road surface from the effect of pipe deflecting and rebounding under these conditions.

Maximum Long-Term Deflection Chart

F/Δy = 60 psi

ASTM Bedding Classification		Density (Proctor) AASHTO T-99	Height of cover (feet) 3	5	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Gravel	Class I																		
	Class II	90%																	
		80%																	
Sand	Class III	90%																	
		85%																	
		75%																	
		85%																	
Clay	Class IV	85%																	
		75%																	
		65%																	
Peat	Class V		This soil class not recommended.																

■ Maximum 7.5% deflection
■ This zone not recommended

Figure 2.

Note: Deflection values shown do not include effect of live load or longitudinal bending.
1. No length of pipe installed under conditions specified will deflect more than is indicated; the pipe will deflect less than the amount indicated if specified density is obtained.
2. External loading based upon soil weight of 120 lbs. per cubic foot.
3. Deflections predicted are based upon pipe which was initially circular prior to installation. Actual deflections may differ because of initial out of roundness caused by storage and/or handling. These variations should be taken into account when measured deflections are compared with those in the table.
4. Bedding classifications are as indicated on page 5 and correspond to ASTM D2321.
5. Deflections listed in table are maximum long-term values. The suggested maximum long-term value is 7.5 percent which is approximately equal to a 5 percent initial deflection.
6. Initial deflection is deflection taken within the 1st 24 hours after trench is backfilled.

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 1, 1991

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: REVISED GRADING & DRAINAGE PLAN OF SALVATION ARMY SILVERCREST (G-16/D101) ENGINEER'S STAMP DATED SEPTEMBER 13, 1991

Dear Mr. Weiss:

Based on the information provided on the referenced submittal received September 13, 1991, the plan is approved for Building Permit.

Sign-off of the Certificate of Occupancy by the Hydrology Development Section will require that the construction of the drainage infrastructure be certified by a professional engineer as to its compliance with the design plans.

If you have any questions, please call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
C.E./Hydrology Section

xc: Alan Martinez

GA
(WP+1145)

25×10

0000 0000 0978

DRAINAGE INFORMATION SHEET

RECEIVED SEP 13 1991

PROJECT TITLE: SALVATION ARMY SILVERCREST ZONE ATLAS/DRNG. FILE #: G-16/D101

LEGAL DESCRIPTION: TRACT A OF THE LANDS OF THE CHURCH OF THE NAZARENE, ALBUQUERQUE, NM

~~OR ADDRESS:~~

ENGINEERING FIRM: WEISS-HINES ENG., INC. CONTACT: STEVE CLARK

ADDRESS: 1100 ALVARADO N.E. 87110 PHONE: 266-3444

OWNER: THE SALVATION ARMY CONTACT: CHUCK LAKIN

ADDRESS: PO BOX 52177, PHOENIX, AZ 85072 PHONE: (602) 267-4208

ARCHITECT: LESCHER & MAHONEY, INC CONTACT: BOB WATKINS

ADDRESS: 2141 EAST CAMELBACK ROAD, SUITE 100 PHOENIX, AZ 85016 PHONE: (602) 381-8580

SURVEYOR: CARL HARRINGTON, INC. CONTACT: CARL HARRINGTON

ADDRESS: 124 MONROE ST. NE. 87110 PHONE: 266-0660

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

G-16/D101

DRB NO. 89-117

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X RESUBMITTAL

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 9-13-91

BY:

25 x 10

0000 0000 0974

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 30, 1991

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: GRADING & DRAINAGE PLAN OF SALVATION ARMY SILVERCREST
(G-16/D101) ENGINEER'S STAMP DATED JULY 1, 1991

Dear Mr. Weiss:

Based on the information provided on the referenced submittal received July 1, 1991, the plan is approved for Building Permit.

Sign-off of the Certificate of Occupancy by the Hydrology Development Section will require that the construction of the drainage infrastructure be certified by a professional engineer as to its compliance with the design plans.

If you have any questions, please call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
C.E./Hydrology Section

xc: Alan Martinez

GA
(WP+1145)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

25 × 10

0000 0000 0975

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SALVATION ARMY SILVERCREST ZONE ATLAS/DRNG. FILE #: G-16

LEGAL DESCRIPTION: TRACT A OF THE LANDS OF THE CHURCH OF

~~CITY ADDRESS~~: THE NAZARENE, ALBUQUERQUE, NM

ENGINEERING FIRM: WEISS-HINES ENG., INC. CONTACT: STEVE CLARK

ADDRESS: 1100 ALVARADO N.E. 87110 PHONE: 266-3444

OWNER: THE SALVATION ARMY CONTACT: CHUCK LAKIN

ADDRESS: PO BOX 52177, PHOENIX AZ 85072 PHONE: (602) 267-4208

ARCHITECT: LESCHER & MAHONEY, INC CONTACT: BOB WATKINS

ADDRESS: 2141 EAST CAMELBACK ROAD, SUITE 100 PHOENIX, AZ 85016 PHONE: (602) 381-8580

SURVEYOR: CARL HARRINGTON, INC. CONTACT: CARL HARRINGTON

ADDRESS: 124 MONROE ST. NE. 87110 PHONE: 266-0660

CONTRACTOR: N/A CONTACT: ____

ADDRESS: ____ PHONE: ____

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 89-117

EPC NO. ____

PROJ. NO. ____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X RESUBMITTAL

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ____ (SPECIFY)

RECEIVED JUL 1 1991 HYDROLOGY DIVISION

DATE SUBMITTED: 7-1-91

BY: ____

25 X

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 27, 1991

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: GRADING & DRAINAGE PLAN OF SALVATION ARMY SILVERCREST SUBMITTED JUNE 12, 1991, FOR BUILDING PERMIT APPROVAL (G-16/D101)

Dear Mr. Weiss:

For Building Permit approval, kindly submit the following:

1. You have not demonstrated that you can convey flows from your site to the future SAD 216. This will require analysis that flows will be confined to the right-of-way and not enter private properties, to include analysis that the flows will not be erosive and cause damages to public or private infrastructure.

Sign-off of the Certificate of Occupancy by the Hydrology Development Section will require that the construction of the drainage infrastructure be certified by a professional engineer as to its compliance with the design plans.

If you have any questions, please call me at 768-2650.

Cordially,

Gilbert Aldaz

Gilbert Aldaz, P.E. & P.S.
C.E./Hydrology Section

GA
(WP+1145)

25×10

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: SALVATION ARMY SILVERCREST ZONE ATLAS/DRNG. FILE #: G-16 / D101

LEGAL DESCRIPTION: TRACT A OF THE LANDS OF THE CHURCH OF

~~CITY ADDRESS~~: THE NAZARENE, ALBUQUERQUE, NM

ENGINEERING FIRM: WEISS-HINES ENG., INC. CONTACT: STEVE CLARK

ADDRESS: 1100 ALVARADO N.E. 87110 PHONE: 266-3444

OWNER: THE SALVATION ARMY CONTACT: CHUCK LAKIN

ADDRESS: PO BOX 52177, PHOENIX, AZ 85072 PHONE: (602) 267-4208

ARCHITECT: LESCHER & MATHONEY, INC CONTACT: BOB WATKINS

ADDRESS: 2141 EAST CAMELBACK ROAD, SUITE 100 PHOENIX, AZ 85016 PHONE: (602) 381-8580

SURVEYOR: CARL HARRINGTON, INC. CONTACT: CARL HARRINGTON

ADDRESS: 124 MONROE ST. NE. 87110 PHONE: 266-0660

CONTRACTOR: N/A CONTACT: ____

ADDRESS: ____ PHONE: ____

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 89-117

EPC NO. ____

PROJ. NO. ____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X RESUBMITTAL

CHECK TYPE OF APPROVAL SOUGHT:

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___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ____ (SPECIFY)

JUN 12 1991

HYDROLOGY DIVISION

DATE SUBMITTED: 6-12-91

BY: ____

25 x 10

0000 0000 0978

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 31, 1991

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: GRADING & DRAINAGE PLAN OF SALVATION ARMY SILVERCREST SUBMITTED MAY 21, 1991, FOR SITE DEVELOPMENT PLAN AND BUILDING PERMIT APPROVAL (G-16/D101)

Dear Mr. Weiss,

Your submittal, referred to above, is approved for Site Development Plan sign-off by the Hydrology Development Section.

For Building Permit approval, kindly submit the following:

1. The NMSHTD permit you submitted, which was previously required, is not an executable document since it is not signed by the NMSHTD. In the future could you please make sure that you provide us with legal permits.

2. I believe you need to review the SAD 216 project, because construction of those improvements do not provide for free discharge from this site. Reason being is that the SAD will not be constructing improvements from your site down to the crossing structures at I-25 near UPS. Please change the language in your plan to reflect this scenario.

Sign-off of the Certificate of Occupancy by the Hydrology Development Section will require that the construction of the drainage infrastructure be certified by a professional engineer as to its compliance with the design plans.

If you have any questions, please call me at 768-2650.

Cordially,

Gilbert Aldaz

Gilbert Aldaz, P.E. & P.S.
C.E./Hydrology Section

GA
~~(WP+1145)~~

PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP
Telephone (505) 768-2500
Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

AN EQUAL OPPORTUNITY EMPLOYER

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NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

APPLICATION FOR PERMIT TO CONSTRUCT DRIVEWAY OR MEDIAN OPENING ON PUBLIC RIGHT OF WAY

		Department Use Only			
District No.	3	Permit No.	3-2044	State Highway No.	(Abandoned) I-25 E. Fr.
Project No.	IR-025-4(65)223	Station No.(s)	see drawing	Mile Post(s)	NA
Posted Speed	NA	Highway ADT	NA	Sight Distance	OK
Type of Vehicle	P-SU			Est. Driveway ADT	NA

TO: New Mexico State Highway and Transportation Department
ATTN: District Highway Engineer
( )Deming ( )Roswell (X)Albuquerque
( )Las Vegas ( )Santa Fe ( )Milan , New Mexico

Application is hereby made by The Salvation Army, (Owner of Property), PO Box 52177, Phoenix, AZ 85072 (Mailing Address), for the purpose of elderly housing (Type of Business or Residence), with the estimated driveway ADT as listed above, for permission to construct (X) driveway(s), or ( ) median opening(s) at the following described location: 600' southwest of Montgomery Blvd. on I-25 access road. One 28 foot Driveway with 24 inch pipe culvert and end sections and One 20 foot Emergency Driveway with 24 inch pipe culvert and end sections.

in Bernalillo County, on State Highway No. I-25 acc. in accordance with the attached plan or sketch. Work will commence on or about July 1, 1991 (Date) and will require approximately 90 days.

The proposed driveway or median opening must be located, designed, and constructed in accordance with the *Regulation for Driveways and Median Openings on Non-Access Controlled Highways*. A Gate ( ), Cattleguard ( ), Additional Fence ( ), Drainage Structure (X), will be required which owner agrees to furnish and hereafter maintain in good repair and closed to livestock. The applicant shall submit a construction traffic control plan for approval. The owner will protect, indemnify, defend, and hold the New Mexico State Highway and Transportation Department harmless from any injury or damage caused the owner, or third parties, by owner's failure to comply with the above. If this permit is granted, owner further agrees to comply with all the conditions, restrictions, and regulations, of the State Highway and Transportation Department. If not constructed, this permit will expire six months from date of issue unless otherwise noted and approved. The permittee shall notify the District Engineer of pending construction at least 72 hours prior to any construction, and upon completion of construction which shall be within 45 days of initiation of construction.

Place Albuquerque, NM, Bernalillo County
Sworn to and subscribed before me this 17th day of May 1991
My commission expires 4-28-94
(Notary Public)

Chuck Lakin SC
(Owner's Signature)
By Stephen D. Clark
Title AGENT FOR OWNER
Owner's Phone No. 266-3444

Permission granted this 7th day of June 1991
Subject to the above stated conditions and the following additional requirements: (see attachments)

Deviation from the stated conditions or the approved sketch may be grounds for revocation.

Distribution
Original-G.O.Files
Copies-District Eng.
Applicant
Traffic Serv. Engr.

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

By Joe C. Torre 6/10/91
(District Engineer or Designee)

Title District Traffic Engineer

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: SALVATION ARMY SILVERCREST ZONE ATLAS/DRNG. FILE #: G-16/D101

LEGAL DESCRIPTION: TRACT A OF THE LANDS OF THE CHURCH OF THE NAZARENE, ALBUQUERQUE, NM

~~CITY ADDRESS:~~ 4301 Bryn Mawr

ENGINEERING FIRM: WEISS-HINES ENG., INC. CONTACT: STEVE CLARK

ADDRESS: 1100 ALVARADO N.E. 87110 PHONE: 266-3444

OWNER: THE SALVATION ARMY CONTACT: CHUCK LAKIN

ADDRESS: PO BOX 52177, PHOENIX, AZ 85072 PHONE: (602) 267-4208

ARCHITECT: LESCHER & MAHONEY, INC CONTACT: BOB WATKINS

ADDRESS: 2141 EAST CAMELBACK ROAD, SUITE 100 PHOENIX, AZ 85016 PHONE: (602) 381-8580

SURVEYOR: CARL HARRINGTON, INC. CONTACT: CARL HARRINGTON

ADDRESS: 124 MONROE ST. NE. 87110 PHONE: 266-0660

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 89-0327

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

MAY 21 1991
HYDROLOGY DIVISION

DATE SUBMITTED: 5-21-91

BY:

25 x 10

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NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

APPLICATION FOR PERMIT TO CONSTRUCT DRIVEWAY OR MEDIAN OPENING ON PUBLIC RIGHT OF WAY

Department Use Only

District No.		Permit No.		State Highway No.	
Project No.		Station No.(s)		Mile Post(s)	
Posted Speed		Highway ADT		Sight Distance	
Type of Vehicle				Est. Driveway ADT	

TO: New Mexico State Highway and Transportation Department
ATTN: District Highway Engineer
( )Deming ( )Roswell (X)Albuquerque
( )Las Vegas ( )Santa Fe ( )Milan , New Mexico

RECEIVED MAY 21 1991

Application is hereby made by The Salvation Army, (Owner of Property), PO Box 52177, Phoenix, AZ 85072 (Mailing Address), for the purpose of elderly housing (Type of Business or Residence), with the estimated driveway ADT as listed above, for permission to construct (X) driveway(s), or ( ) median opening(s) at the following described location: 600' southwest of Montgomery Blvd. on I-25 access road

in Bernalillo County, on State Highway No. I-25 acc. in accordance with the attached plan or sketch. Work will commence on or about July 1, 1991 (Date) and will require approximately 90 days.

The proposed driveway or median opening must be located, designed, and constructed in accordance with the *Regulation for Driveways and Median Openings on Non-Access Controlled Highways*. A Gate ( ), Cattleguard ( ), Additional Fence ( ), Drainage Structure (X), will be required which owner agrees to furnish and hereafter maintain in good repair and closed to livestock. **The applicant shall submit a construction traffic control plan for approval.** The owner will protect, indemnify, defend, and hold the New Mexico State Highway and Transportation Department harmless from any injury or damage caused the owner, or third parties, by owner's failure to comply with the above. If this permit is granted, owner further agrees to comply with all the conditions, restrictions, and regulations, of the State Highway and Transportation Department. If not constructed, this permit will expire six months from date of issue unless otherwise noted and approved. The permittee shall notify the District Engineer of pending construction at least 72 hours prior to any construction, and upon completion of construction which shall be within 45 days of initiation of construction.

Place NM, Bernalillo County
Sworn to and subscribed before me this 17th day of May 1991
My commission expires 11-28-94
(Notary Public)

Chuck Lakin SC (Owner's Signature)
By Stephen D. Clark
Title AGENT FOR OWNER
Owner's Phone No. 266-3444

Permission granted this _____ day of _____, 19____
Subject to the above stated conditions and the following additional requirements: _____

Deviation from the stated conditions or the approved sketch may be grounds for revocation.

Distribution
Original-G.O.Files
Copies-District Eng.
Applicant
Traffic Serv. Engr.

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

By _____
(District Engineer or Designee)

Title _____

25 x 10

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FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

CLARENCE V. LITHGOW
CHIEF ADMINISTRATIVE OFFICER

DAN WEAKS
DEPUTY CAO PUBLIC SERVICES

FRED E. MONDRAGON
DEPUTY CAO DEVELOPMENT & ENTERPRISE SERVICES

RAY R. BACA
DEPUTY CAO PUBLIC SAFETY

July 6, 1989

Chris L. Weiss, P.E.
Weiss-Hines Engineering
1100 Alvarado, NE
Albuquerque, New Mexico 87108

RE: GRADING AND DRAINAGE PLAN OF SILVERCREST HOUSING, SUBMITTED MAY 19, 1989, FOR SITE DEVELOPMENT PLAN APPROVAL (G-16/D101)

Dear Mr. Weiss,

Your submittal, referred to above, is approved for Site Development Plan sign-off by the Hydrology Section.

For Building Permit approval, kindly submit the following:

1. a final grading plan;

2. a copy of the permit from the state highway department allowing construction within their right-of-way;

3. an erosion control plan which retains the 10 year storm volume within the site, with details of the berm(s); and

4. details of the pond bottom and side treatments. For this last detail, we recommend native grasses which require little watering to keep them healthy, but which will keep the soil open and allow water to infiltrate quickly rather than stand for several days.

Sign-off of the Certificate of Occupancy by the Hydrology Section will require that the construction of the drainage infrastructure be certified by a professional engineer as to its compliance with the design plans.

If you have any questions, please call me at 768-2650.

Cordially,

Stuart Reeder

G. Stuart Reeder, P.E.
C.E./Hydrology Section

GSR
(WP+1145)

AN EQUAL OPPORTUNITY EMPLOYER

25×

0000 0000 0983

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SILVERCREST HOUSING ZONE ATLAS/DRNG. FILE #: G-16/D100

LEGAL DESCRIPTION: WESTERN PORTION TRACTS B-1 & C-1, LANDS OF CHURCH OF NAZARENE

CITY ADDRESS:

ENGINEERING FIRM: WEISS-HINES ENGINEERING CONTACT: STEVE CLARK

ADDRESS: 1100 ALVARADO NE PHONE: 505-266-3444

OWNER: CONTACT:

ADDRESS: PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

RECEIVED
MAY 19 1989
HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 89-327

EPC NO. Z-89-19

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE/GRADING PLAN

X CONCEPTUAL GRADING & DRAINAGE PLAN

___ RESUBMITTAL

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: MAY 19, 1989 DATE RECEIVED:

BY: Weiss-Hines Engineering, Inc. RECEIVED BY:

25 x 10

0000 0000 0984

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: G16 DATE: 5/9/89 @ 10:30

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Silverscreen Elderly Housing

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: Lands of The Church of The Nazarene Tract B-1

APPROVAL REQUESTED:

___	PRELIMINARY PLAT	___	FINAL PLAT
X	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
___	OTHER	___	ROUGH GRADING

RECEIVED MAY 1 9 1989 HYDROLOGY SECTION

ATTENDANCE:	WHO	REPRESENTING
	Steve Clark	Weiss-Hines
	Carlos Montoya	Hydrology Section

FINDINGS:

(1) Need conceptual drainage plan for site Plan approval
(2) Believe that flows from site are conveyed to American Hwy pond at the Pan American Freeway
(3) Due to downstream flooding at this location retention ponding is appropriate
(4) Need to retain total developed runoff from site
(5) Need to accept off-site flows and convey these flows to their public outfall
(6) Need to address how the retention pond will be discharged in the future.
(7) Work in Highway R/W requires a permit from the Highway Dept.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos A Montoya SIGNED: Steve Clark
TITLE: _____ TITLE: _____
DATE: 5-9-89 DATE: 5/9/89

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

25 x 10

0000 0000 0985

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: G16 DATE: 5/19/89 @ 10:30

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Sketch Plat Review

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: Lands of The Church of The Nazarene Tract B-1

APPROVAL REQUESTED:

___	PRELIMINARY PLAT	___	FINAL PLAT
X	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
___	OTHER	___	ROUGH GRADING

ATTENDANCE:	WHO	REPRESENTING
	Steve Clark	Weiss Hines
	Carlos Montoya	Hydrology Section

FINDINGS:

1. Need a [illegible] to the proposal
2. Believe that there is [illegible] enough to handle the pond at the NE Amenity Facility
3. Due to the location of the [illegible] the location seems to be appropriate
4. Need to note that the legal lot is part of a tract
5. Need to show off site flows [illegible] to this future on site
6. Would to allow how the [illegible] will be discharged in the future
7. Work in Highway R/W requires a permit from the Highway Dept.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Carlos A Montoya	SIGNED:	Steve Clark
TITLE:		TITLE:	
DATE:	5-22-89	DATE:	5/22/89

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

25x

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PLANS/PLATS ON FILE

FILE DESC: G16/D101

PLANS/PLATS 1

25×10

0000 0000 0987

25×10