FHR-8-300 (11-78)

United States Department of the Interior
Heritage Conservation and Recreation Service

National Register of Historic Places Inventory—Nomination Form

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic LAWS NARROW GAUGE RAILROAD HISTORIC DISTRICT

and/or common Bishop Station 1883-1890; Laws Station 1890-1960.

2. Location

street & number Silver Canyon Road. NE of Laws vicinity ___ not for publication

city, town Laws ___ vicinity of congressional district 18

state California code GSA 06 county Inyo code GSA 027

3. Classification

Category	Ownership	Status	Present Use	
X district	X public	X occupied	___ agriculture	X museum
___ building(s)	___ private	___ unoccupied	___ commercial	___ park
___ structure	___ both	___ work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	___ yes: restricted	___ government	___ scientific
	___ being considered	X yes: unrestricted	___ industrial	___ transportation
		___ no	___ military	___ other:

4. Owner of Property

name County of Inyo

street & number Drawer N

city, town Independence, ___ vicinity of state California 93526

5. Location of Legal Description

courthouse, registry of deeds, etc. Inyo County Courthouse

street & number Drawer N.

city, town Independence, state California 93526

6. Representation in Existing Surveys

title ___ has this property been determined elegible? ___ yes X no

date ___ federal ___ state ___ county ___ local

7. Description

Condition		Check one	Check one
___ excellent	X deteriorated	X unaltered	X original site
X good	___ ruins	___ altered	___ moved date _____
X fair	___ unexposed		

Describe the present and original (if known) physical appearance

For the reader's convenience a "Location Map" of buildings, structures and railroad equipment proposed for "National Registry" are shown on page 23. They are identified by Letters "A" through "H" as follows:

A. - Depot
A.1 - Outhouses
B. - Railroad Track
B.1 - Locomotive and Cars
B.2 - Death Valley Railroad Car
B.3 - Box Car Village
C. - Agent's House
D. - Water Tower
E. - Water Pump House
F. - Oil Tank Tower
G. - Oil Pump House
H. - Armstrong Turn Table.

See continuation sheets #7, pages 24 to 122.

Buildings and structures removed or dismantled that were in existance on the Laws Station Site to be rebuilt as archeological studies and fundings permits can be found in , pages 123 to 130. Items X.1 to X.20.

8. Significance

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion	
___ 1400–1499	X archeology-historic	___ conservation	___ law	___ science	
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture	
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	___ engineering	___ music		
X 1800–1899	X commerce	___ exploration/settlement	___ philosophy	___ theater	
X 1900–	X communications	X industry	___ politics/government	X transportation	
		___ invention		___ other (specify)	

Specific dates 1883- **Builder/Architect**

Statement of Significance (in one paragraph)

The Laws Station as it was originally called is proposed for National Registry because of the historical part it played in the development of the east side of the Sierra Nevada Mountains. This Railroad "The Carson & Colorado" ran from Mound House near Carson City, Nevada to Keeler, California a distance of 307 miles. The mineral wealth of Esmeralda and Nye Counties in Nevada and Mono and Inyo Counties in California was well known but in many cases were handicaped becaused of the lack of fast reliable transportation. The Carson & Colorado provided the greatly needed transportation and consequently it can be truthfully said that this railroad was largely responsible for the development of these four counties located in two different states. Most of this development took place between 1880 and 1920. Between 1895 and 1920 timbering and agriculture developed and was greatly expidated by this railroad. This railroad is truly very rich in California history, particularly during the period between 1880 and 1910.

All that remain today of this once bustling and highly profitable railroad is the Laws Station now known as the Laws Railroad Museum and Historical Site. It is a complete railroad yard consisting of tracks, locomotive and cars, depot, agent's house, pump houses and oil and water tanks. Of utmost importance is the fact that it is one of the very few remaining examples of a "Narrow Gauge" railroad left in the United States.

In 1880 William Sharon, manager of the Virginia and Truckee Railroad was looking for a new bonanza the same as the Virginia City mother lode had been in years gone by. He had heard many tales about the mineral wealth of the dry arid desert region south of Carson City, Nevada. In the spring of that same year he persuaded a financer named Darius Mills to finance the railroad. By May 10, 1980, the Carson & Colorado Railroad had been incorporated and with the capable assistance of a railroad engineer by the name of Ebinery Yerington, soon had the project underway. By 1883 the railroad was completed to "Bishop Station" (Laws) and Keeler, California.

Continued on page # 21 .

Continuation Sheets

9. Major Bibliographical References

See Continuation Sheets for Additional references.

The Slim Princess - All pages By: John Hungerford.
Slim Rails Through The Sands - P. 1-42 By: George Turner.
Steam Cars To The Comstock - P. 71-107 By: Lucius Beebe & Charles Cl
Narrow Gauge Nostalgia - P. 38-59 By: George Turner

10. Geographical Data

UTM NOT VERIFIED
ACREAGE NOT VERIFIED

Acreage of nominated property 4.05 Acres

Quadrangle name Bishop Quadrangle scale 1:62500

UMT References

	Zone	Easting	Northing		Zone	Easting	Northing
A	11	380756	4140080	B			
C				D			
E				F			
G				H			

Verbal boundary description and justification

See continuation sheet Item #10, page 22.

List all states and counties for properties overlapping state or county boundaries

state code county code

state code county code

11. Form Prepared By

name/title ROBERT A. DINSMORE - Assistant Administrator.

organization Bishop Museum & Historical Society date February 15, 1981

street & number P.O. Box 363 telephone (714) 873-5950

city or town Bishop, state California 93514

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national ___ state X local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89–665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the Heritage Conservation and Recreation Service.

State Historic Preservation Officer signature K McEllen

title SHPO date 8/11/81

For HCRS use only
I hereby certify that this property is included in the National Register

Beth Grosvenor date 10/1/81

UNITED STATES DEPARTMENT OF THE INTERIOR
HERITAGE CONSERVATION AND RECREATION SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

CLASSIFICATION:

This collection of railroad-related structures and objects has been classified as a "district" because it is, as the term district is defined in federal regulations, "a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development." In addition, there are numerous precedents for listing railroad systems, or parts of railroad systems, as National Register Historic Districts.

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SITE CONDITION AND ENVIRONMENT

The Museum Site encompasses 11.12 acres, and 4.05 acres are proposed for National Registry. Please see boundary map on page 23. All of the buildings and structures of Registry significance are located on the Museum Property. Therefore, it can be stated that the site and environmental conditions are the same for all of the buildings and structures.

The physical condition of the site grounds consists of about three acres of lawns, trees and shrubs. Also, foot paths and driveways are covered with decomposed granite, except one asphalt driveway about 15 feet wide and 600 feet long. The front or north side of the site grounds adjacent to the county road has wood fence and gates, consisting of 4"x6" posts and 3- 2"x6" board slats between posts. The Agent's House is also surrounded by the same type of fence. The west, south and east sides of the property has a barbed wire fence along the property lines.

The floor of the Owens Valley surrounding the Museum is mostly sage brush, scattered willow, cottonwood and locust trees. Along the streams and Owens River, that flows through the valley, heavy stands of scrub willow bushes and trees can be found. Even though Laws is located on an alluvial plane on the floor of Owens Valley and has an arid climate it is surrounded by high mountain ranges of unsurpassed beauty, namely, the White Mountains which are on the east, the Sierra Nevada Range is on the west and the Casa Diablo Mountains are on the north.

See appendix #VIII for environmental detail.

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GENERAL

This is the largest section in this application. It covers detailed description of the buildings, structures and railroad equipment. For the sake of uniformity and to insure complete treatment of each one, the following outline was used:

7. Condition of Buildings or Structures;

7.1 Altered or Unaltered;

7.2 Moved or Original Site;

7.3 Present and Original Physical Appearance;

A. Description (Physical Appearance);

B. Historic District or Historic Site;

C. Individual Buildings;

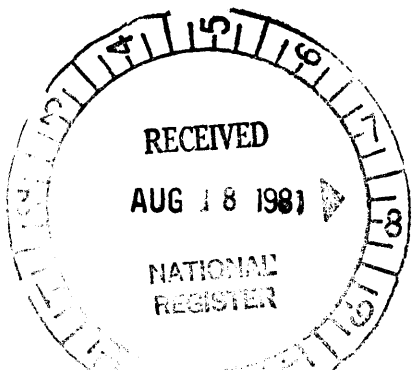
1. Technical Description;
2. Measurements (usually shown on a separate drawing);
3. Listing of any Structual Changes;
4. Listing of the Architectural Style;
5. Listing of any Unique Features;

D. Condition of Site, its integrity and degree it has retained its historical character.

This outline is in compliance with the National Register Program, guidelines published in "How to Complete National Register Forms."

ITEM #7

BUILDING "A" DEPOT ITEM #7



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BUILDING "A" DEPOT

7. Description and Condition of Building

See continuation drawings at end of this section.
The depot is generally in fairly good condition but major repairs are needed as follows:

The loading platform needs extensive restoration;

The platform flooring is heavily weathered, cracked, splintered and broken in several places. Replacement of about 50% of the platform flooring is necessary;

The platform side board from the ground to floor level are in much the same condition on the east and west sides but renailing and some replacement will restore quite easily;

On the south side of the platform dirt was piled to form a dirt incline from the ground level to the platform floor level. This has resulted in the 8" x 8" wood pillars and the siding to cave in in several places. To repair, the dirt must be removed and the pillars and plank siding replaces;

About 20% of the 3" x 10" platform stringers are so badly cracked that replacement is necessary;

The cedar shingle roof needs repairs and eventually replacement;

The building is settling about 1 1/2 inches on its foundation in the middle of the east side, dry rot is the cause. Extensive foundation repairs will be necessary.

7.1 The building is unaltered.

7.2 The depot is on the original site.

7.3 DESCRIPTION - Present and Original

7.3A. The depot was built in 1883 and was in continuous use until the railroad service was discontinued in 1960, because of lack of business. It is a two story building. It contains a ticket office, waiting room, baggage room and freight room on the ground floor. The second floor has one big and one small room, the big room was used for additional office space and storage, the small one was used for storage only.

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7.3 B. Classification

See continuation sheet Item 3 Classification Page #16

7.3C-1 CONSTRUCTION
FOUNDATION DETAIL

The foundation under the loading platform and the freight room consists of 6" x 8" and 8" x 8" Jefferey Pine (J.P.) pillars. The pillars rest on 3" x 10" or larger base plates. About half of these base plates rest on the ground and are partially deteriorated from dry rot. These pillars support 6" x 8" J.P. stringers which are about 5' apart. The stringers support 3" x 10" J.P. floor Joist on 2' centers.

The foundation under the ticket office, waiting room and baggage room consists of 8" x 8" J.P. stringers that rests on the ground. As a result after 97 years, the rim stringers are 100% deteriorated on the east side and are partially deteriorated on the south, north and west sides. The inside stringers are all 6" x 8" J.P. and they also lay on the ground. They are placed on about 6' centers. 2" x 6" J.P. mud sills rest on the rim stringers and inside stringers and no deterioration can be found on any of the mud sills. The mud sills support 2" x 6" J.P. floor joist set on 2' centers.

FLOORING DETAIL

The sub floor under the ticket office and waiting room are 1" x 6" Douglas fir (D.F.) set diagonally to the floor joists. The sub flooring is covered with 3/4" x 3-1/2" Tongue and Groove (T&G) D.F. flooring. The baggage room flooring consists of 2" x 5" D.F. nailed directly to the floor joist. The flooring in the freight room is also 2" x 5" D.F. nailed directly to the floor joists. The loading platform flooring consists of 2" x 10" D.F. nailed directly to the floor joists. The flooring in the freight room and loading platform are about 3' higher than the baggage room. The waiting room and ticket office floors are about 8" higher than the baggage room.

The second floor flooring consists of 3/4" x 3 1/2" T&G nailed directly to the floor joists.

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STUDDING DETAIL

All of the studding and stud plates are 2" x 4" J.P. on both the first and second floors except the freight room. The freight room studding are 4" x 6" with the same size stud plates both top and bottom. The 4" x 6" studs are 7-1/2' centers. The freight room has a ceiling height two stories high.

ROOF RAFTER AND ROOF DETAIL

The roof rafters are 2" x 6" J.P. on 2' centers and support 1" x 12" J.P. roof sheathing set about 2" apart. The roof is cedar shingles. The roof has an 8' overhang on the north, south and west sides and a 6' overhang on the east side. The overhang is supported by 2" x 6" J.P. set at a 27 degree angle and nailed to the roof rafters. They are on 7' centers. The roof design is a medium gable with a gablet at the north and south ends.

EXTERIOR WALL DETAIL

The extior walls are covered with 1" x 12" J.P. vertical boards and 1" x 3" J.P. batten. All windows and door frames are plain molding with 1" x 5-1/2" J.P. and are painted a medium brown. The exterior wall is painted with light yellow textured paint.

INTERIOR WALL AND CEILING DETAIL

The ticket office, waiting room and baggage room interior walls and ceilings are covered with 5/8" x 4" T&G finished D.F. The walls are painted light yellow and all window and door trims are painted a medium brown.

The freight room roof rafters, interior walls and studding have been "white washed" down to about 7' above floor level. The last 7' have been painted box car red.

The second floor large office walls and ceiling are finished the same as the first floor ticket office, waiting room and baggage room. The second floor small storage room is unfinished with the studding and roof rafters exposed.

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WINDOW DETAIL

Ticket office: (4) 3'-4"x5'-8" Double sash (D.S.)
12- Light windows (L.W.) (i.e. 6/6)

Waiting room : (2) 3'-4"x5'-8" Double sash (D.S.)
12- Light windows (L.W.) (i.e. 6/6)

Baggage room : (1) 3'-4"x5'-8" Double sash (D.S.)
12- Light windows (L.W.) (i.e. 6/6)

Freight room : (1) 3'x3' Single sash (S.S.)
1- Light window (L.W.)

WINDOW DETAIL - Second Floor

Large room : (1) 3'x3' S.S. -6 L.W.

Small room : (2) 3'x3' S.S. -6 L.W.

At north and south ends above hipped roofs are:
(2) 3'-4"x5'-8" Single hung, 12- Light windows

DOOR DETAIL - First Floor

Ticket office: (2) 32"x6'-8" 5 panel doors D.F.

Waiting room : (2) 32"x6'-8" 4 panel doors D.F.

Baggage room : (2) 32"x6'-8" 5 panel doors D.F.

Baggage room : (2) Sliding doors 7'-5"H x 6'-9"W 5 panels each

Freight room : (2) Sliding doors 6'-8"H x 5'-10"W
5/8"x4" T&G, D.F. finished siding backed by
1"x5" J.P. slats.

ELECTRICAL WIRING DETAIL

Electricity was first made available to the people of Owens Valley about 1916. It was a year or so after 1916 that the depot and other buildings were wired for electricity. When the museum started in 1964 the old depot wiring was in such poor condition that the entire wiring was replaced mostly in conduit. It now meets the National Board of Fire Underwriters, State and County wiring codes.

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PLUMBING DETAIL

In 1883, when the depot was built, two-2" pipe lines were stubbed out in boxes on the east side of the depot. Folding type 1 1/4" fire hoses were placed in both boxes. The pipes have long since deteriorated and the hoses have been replaced in other locations. The letters "Fire Hose" can still be faintly seen. There was no other plumbing in this building.

7.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

7.3 C-3 CHANGES

No structual changes have been made. An addition was made to the freight room to enclose an area 10'x18"x7' high to house a model railroad display. It is made of two by fours with 1/2" plywood top and sides. Two sides have glass panels for observation. This is temporary and great care was taken so when it is removed the walls will be exactly the same as they were originally.

7.3 C-4 ARCHITECTURAL STYLE

The depot is a two story rectangular structure. After considerable research and reviewing several books such as Marcus Wiffen's American Architecture Since 1780, it became apparent that this depot has a style typical of hundreds of other depots exactly the same or similar. Research indicates that the first depots of this style were built about 1870 on Eastern Railroads. Gradually similar depots were built across the United States. The original architects are unknown.

7.3 C-5 UNIQUE FEATURES

Even though there were hundreds of depots Similar to the depot at Laws, there are unique differences.

- One brick chimney on the north side of the freight room is supported by timbers at about 7' above ground level. Then the brick chimney 18"x18" raises straight up and through the roof about 20'. Whether it was an after thought or conservation of

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7.3 C-5 UNIQUE FEATURES CONT.

- There are two major kinds of wood used in this structure. Oregon Pine is used for flooring in the offices and the interior walls. Obviously the wood had to be timbered and milled somewhere in the north west. But a large portion of the timbers from two by fours on up to eight by eights are Jefferey Pine and were milled at a lumber mill at Mammoth Lakes, California., located about 40 miles north of Laws. This undoubtably explains the generous use of big timbers throughout the entire structure even including the foundation. Also another unique feature about Jefferey Pine is that it is highly resistant to termites. No termites have been found in any of the buildings on the museum site.
- The roof overhang on the east side of the depot is only 6' wide while the other three sides are 8'. This was done to provide clearance in the event that the narrow gauge railroad was converted to standard gauge. This would allow room for larger locomotives and larger box and passenger cars. Even though numerous attempts were made through the years to convert to standard gauge it never happened.
- Most depots have a "bay window" in the office on the track side of the building. This enables the dispatcher to look up and down the track. The telegraph equipment was usually placed on a shelf or desk in this window. The Laws depot has no "bay window", and the telegraph equipment was placed on a regular desk. Further, most depots have a "mail crane" (mail bag grabber) in the box window. But again with no "bay window", the mail crane mechanism had to be automatic with no help from the dispatcher. (Note a "mail crane" is a post located beside the track and close enough so that the train need not stop and the engineer can grab the bag as the train goes by). The mail crane post is missing at Laws and attempts are being made to replace it.
- Another item missing is a "Signal Tower". It was located on the east side of the depot. Attempts are being made to replace this tower complete with signal equipment.

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7.3 D CONDITION OF DEPOT IN RELATION TO ITS HISTORICAL CHARACTER.

It is the intent of the museum officers to make every effort to keep the depot exactly as it was since it was built in 1883. Further, eventually each room will be equipped as it was originally. This work is partially done at the present time. The ticket office has two of the original desks in place. One is equipped with the original Western Union Telegraph equipment. There are also three glass display cases in this room. One contains open samples of books, and a wide assortment of Laws Railroad forms used before the turn of the century. The other two cases display a wide variety of railroad equipment such as switch locks, name plates, telegraph equipment and many many more. From a historic point of view they are irreplacable historic records and paraphernalia.

The passenger waiting room closely resembles its original appearance. The original cast iron coal burning stove is still in its original place and in good working condition. Several old captain's chairs, a bench and a tin water tank for drinking water complete the furnishings for this room. It is all the original equipment. Historically, when Laws was a town of several hundred people this waiting room was the town gathering place, especially on cold winter days. Also, thousands of passengers waited in this room to board trains for points all over the world.

The baggage room now displays a varied assortment of very old trunks, suitcases and a carpetbag or two. There are a few other display items that will be removed when more display space is available.

The freight room is now used largely for display of a miniature train, an old horse drawn hearse, a variety of horse and mule harnesses, blacksmith shop equipment and a branding iron display. All of this equipment will be eventually replaced with old antique equipment housed in shipping crates. The outside loading platform will be equipped the same way.

The second floor was largely used for storage and since it will be impractical to use these rooms for display it is intended to continue to use them for storage.

Historically, the depot is an integeral part of this historical landmark site. This railroad terminal had much to do

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CONDITION OF DEPOT IN RELATION TO ITS HISTORICAL CHARACTER CONT.

Even though a large number of railroad artifacts and antiques are displayed in the agents office, waiting room and baggage room it would appear that this adds greatly to the historical character of the depot. The only exceptions are the miniture train display, and a host of objects and artifacts that are not railroad equipment. This is only temporary and both will be removed as soon as more display space is available in other buildings.

BUILDINGS "A.1" THE OUTHOUSES

These men's and women's outhouses were also built in 1883. It could be said they are a part of the depot. They were in constant use from 1883 to 1974 when Inyo County Department of Parks and Recreation built new modern rest rooms that meet all State and County health and sanitation requirements. However, the outhouses create all kinds of visitor interest even though they are no longer usable. They are photographed almost as often as other historic structures nearby.

'. The outhouses are in good condition.
'.1 The outhouses are unaltered.
'.2 The outhouses are on their original site.
'.3 DESCRIPTION

These outhouses are the same as countless thousands built across the country for the past 100 years or more. They are part of the Laws Railroad Museum Historical Site.

'.3 C-1 CONSTRUCTION

They are made of self supporting 1"x12" J.P. board and batten. And have two hole seats in each one. The doors are made of 3/4" T&G, D.F. flooring. The seats are made of a single piece of 1"x20" J.P. cut and seasoned locally.

'.3 C-2 MEASUREMENTS

The measurements are 4'-2" deep 5'-3" wide and 8'-6" high

'.3 C-3 STRUCTURAL CHANGES

None

'.3 C-4 ARCHITECTURAL STYLE

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BUILDING "A.1" THE OUTHOUSES CONT.

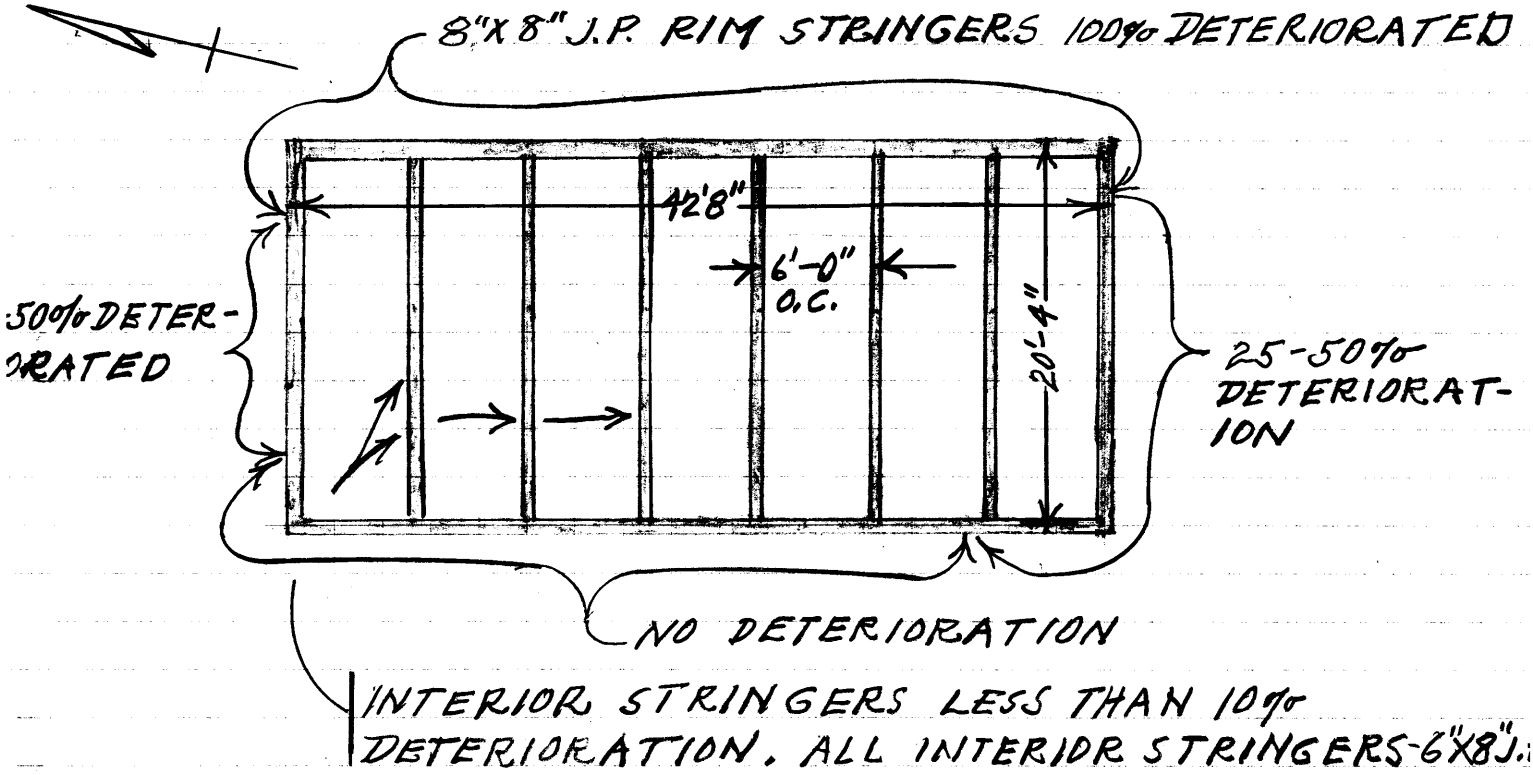
7.3 C-5 UNIQUE FEATURES

It is unbelievable but true that many visitors would prefer to use these old outhouses rather than the new clean sanitary ones, if they were allowed to do so. For children and many adults it seems to be a novelty.

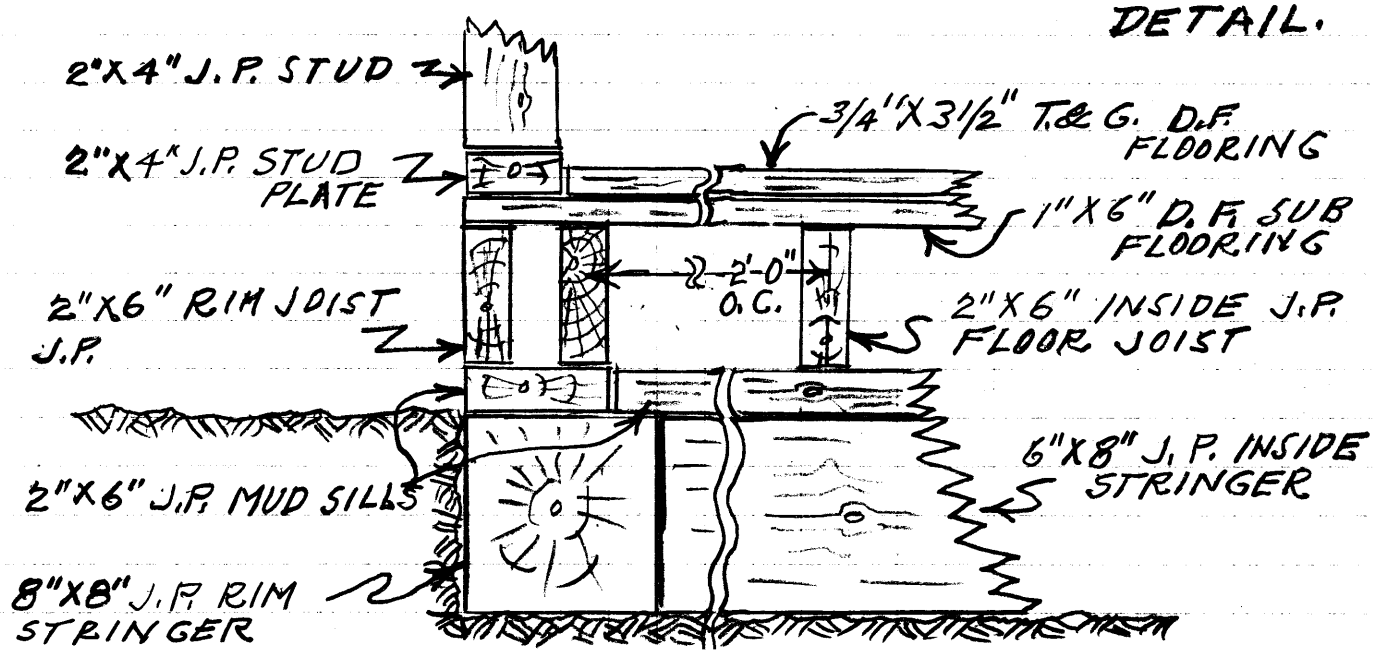
7.3 D HISTORICAL CHARACTER

These outhouses are the same as when they were built in 1883. No changes of any kind are contemplated.

DEPOT FOUNDATION DETAIL

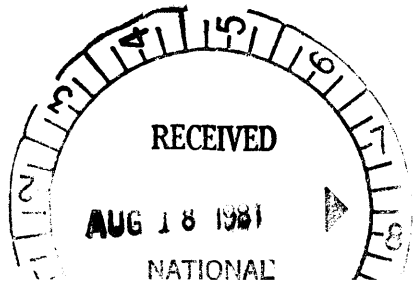


DEPOT
TYPICAL FLOOR JOIST, STRINGER AND FOUNDATION DETAIL.



ITEM #7

RAILROAD TRACK "B"



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RAILROAD TRACKS "B"

7. DESCRIPTION AND CONDITION OF THESE TRACKS

See continuation drawing at the end of this section, page 42. The Railroad tracks consist of a mail line 1104.5' long, three branch tracks or "sidings", and three switches. This railroad was called "Narrow Gauge" because the rails are only 3' apart, whereas standard gauge rails are 4' - 8' apart. Two different size rails were used. The smaller rails are 35 pound rails. That is, each 3' of rail weighs 35 pounds. The larger rails are 60 pounds per 3' of rail. There is a total of 753' of 35 pound track and 1004.5' of 60 pound track. All of the tracks are in fairly good condition and require no repair at this time.

7.1 The heavily used part of the tracks have been changed three or four times because of wear which is common procedure on any railroad. Two of the switches have been changed but one is the original installed in 1883.

7.2 The tracks are on the original location.

7.3 A. DESCRIPTION - Present and Original

The tracks, ties and switches were originally laid in 1883. Originally, there were two more sidings on both sides of the main line that ran all the way from the Agents House to a point about 1/4 mile north of the Silver Canyon Road - a total distance of about 1/2 mile. All of the track has been removed north of the Silver Canyon Road. The two sidings south of the Silver Canyon Road to the Agents House have also been removed leaving only the main line, three sidings and three switches.

7.3 B. CLASSIFICATION - District

7.3 C-1 CONSTRUCTION DETAIL - No description necessary.

7.3 C-2 MEASUREMENTS - See continuation drawing on page 42.

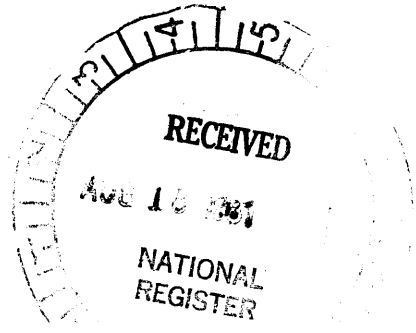
7.3 C-3 CHANGES - None other than those detailed in Item 7.3 A.

7.3 C-4 ARCHITECTURAL STYLE - None

ITEM #7

TRAIN "B.1"

LOCOMOTIVE CARS AND CABOOSE



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TRAIN "B.1" LOCOMOTIVE, CARS, & CABOOSE

GENERAL

This section from pages 44 to 58, includes the whole train which consists of locomotive #9, its tender, three box cars, a gondola ore car, a cattle car and a caboose. Please see pictures and drawings at the end of this section. Unless otherwise noted all of the wood used in this train is Douglas Fir.

LOCOMOTIVE #9 AND TENDER

7. CONDITION OF LOCOMOTIVE

Locomotive #9 and its tender is complete as far as appearance is concerned and is one of the Museum show pieces. The engine is in poor mechanical condition and the cost of restoration to make it operative would be prohibitive, but for show purposes it is completely satisfactory. The tender is in good mechanical condition.

7.1 ALTERED OR UNALTERED - Unaltered

7.2 Does not apply

7.3 A PHYSICAL APPEARANCE

The locomotive and tender appear the same as when they were new. They have recently been repainted. The colors are black, white, aluminum and red.

7.3 B DISTRICT

7.3 C-1 TECHNICAL DESCRIPTION - Locomotive #9 and Tender

Make - Baldwin Type 4-6-0 Made 1909 Ser. No. 34035
Cylinder Size - 16"x20" Smoke box length 52"
Boiler Length - 14'3" Drive Wheel Diameter 42"
Boiler Pressure - 180 Lbs. per square inch
Center of rear pilot wheel to center of first driver 48", center of first driver of second 50", center of second driver to center of third driver 58".
Locomotive Weight - 87,150 Lbs.

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TENDER

Type "U" shaped.
Water Tank capacity 2,835 gallons.
Oil Tank capacity 1,260 gallons.

3 C-2. MEASUREMENTS - See drawing at the end of this section.

3 C-3 STRUCTURAL CHANGES - None

3 C-4 Does not apply.

3 C-5 UNIQUE FEATURES - None

3 D. HISTORICAL CHARACTER

The locomotive whistle and the tender back up light is missing. Otherwise their historical character is the same as when they were manufactured in November, 1909.

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THREE BOX CARS #7, 32 AND 17

'. CONDITION OF THE BOX CARS

All three box cars are identical in construction except for the trucks and truss rods. Their overall condition is fairly good. Since they have been exposed to the weather since before 1900, considerable warping has taken place on the roof sheathing. Re-roofing and repairs are necessary. Some warping and cracking has also taken place with the underframe but no repair are recommended. Extensive repairs have been made to the exterior siding and the sliding doors. No additional repairs are necessary.

'.1 ALTERED OR UNALTERED - Unaltered

'.2 Does not apply

.3 A. PHYSICAL APPEARANCE

With the siding repaired and the box cars freshly painted red, the cars have a good appearance. The trucks have not been painted but do not distract from the overall appearance.

'.3 B DISTRICT

'.3 C-1 TECHNICAL DESCRIPTION - Three Box Cars.

Car #7 Lt. Wt.	16,500 lbs.	Capacity:	20,000 lbs.
Car #32 " " .	16,100 lbs.	Capacity:	20,000 lbs.
Car #17 " " .	18,900 lbs.	Capacity:	40,000 lbs.

TRUCKS

Standard four wheel two axle per truck plus complete air and hand brake assembles on the two cars with 20,000 lb. capacity. The third car trucks are made of heavier material thus providing a capacity of 40,000 lbs. The underbody, siding ets., are the same except four 7/8" truss rods are used instead of two on car #17.

UNDERBODY

The underbodies consist of 6- 5"x7"x27" D.F. floor joists, 2- 6"x7"x92" end sills, 2 couplers, 2- 5'x12"x92 Oak

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INTERIOR DECKING

1 1/2"x5 1/2"x7' -1" T.& G. laid crosswise to longitudinal sills.

STUDDING DETAIL

27- 1 1/2"x3 3/4"x76" studs mortised into top plates with 20- 1/2"x92" steel rods placed beside studs and running through the underframe truss rod supports and up through the top plate, 8- 1 1/2"x3 3/4"x81" diagonal braces between studs.

INTERIOR SIDING

The interior siding consists of 3/4"x3 1/4" T.& G. finished lumber placed horizontally up 56" from deck.

EXTERIOR SIDING

The exterior siding consists of 3/4"x3 1/4" T.& G. finished lumber placed vertically. The two sliding doors are made of one layer of 3/4"x3 1/4" T.& G. outside placed vertically and the inside consists of 3- 1 1/2"x5 1/2" bats and two same size diagonal braces. The doors are 57" long and 74" high.

ROOF RAFTERS

The roof rafters consists of 7- 1 3/4"x6"x92" tapered beams mortised into longitudinal top sills, a 1/2"x92" steel rod is placed parallel to each beam. These beams support 3- 1 1/2" x3 3/4" rafters that are placed parallel to the top sills. These rafters support the roof sheathing.

ROOF SHEATHING

The roof sheathing consists of two layers of 3/4"x 3 1/4" T.& G. placed at right angles to the roof ridge and overlapped one half board to shed water. The roofwalk consists of 3- 1"x6" boards supported by 15- 2"x3" cross pieces.

7.3 C-2 MEASUREMENTS

See drawing at the end of this section.

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7.3 C-5 UNIQUE FEATURES

The entire car bodies are made of wood which means that these cars are very old and made sometime before 1900. Yet, in spite of their age, they are structually sound and could carry a full load. Also, the air brake assembly uses one air ram cylinder per car to activate the brakes whereas all larger cars use two air ram cylinders per car.

7.3 D. HISTORICAL CHARACTER

All components of these cars have been carefully preserved and any replacements are identical to the original design. Even the "Box Car Red Paint" was ordered direct from the Sherwin Williams factory to duplicate the original red color. Also, all lettering was photographed before painting so that the lettering could be exactly duplicated.

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GONDOLA ORE CAR #339

7. DESCRIPTION AND CONDITION

The condition of this gondola type car is fairly good. The trucks, underframe, slanted floor and sides are also in good condition. The side gates are weathered and some of the fourteen gates are slightly warped.

7.1 ALTERED OR UNALTERED - Unaltered

7.2 Does not apply

7.3 A PHYSICAL APPEARANCE

This car has also been repaired and painted a box car red. The trucks have not been painted.

7.3 B DISTRICT

7.3 C-1 TECHNICAL DESCRIPTION

Lt. weight 21,000 lbs. capacity 40,000 lbs. The trucks are heavy duty to support a 40,000 lb. load.

UNDERFRAME

The underframe is identical to the box cars except that the two bolsters are made of steel consisting of 1- 1"x 8".97" bar and one truss bar 1"x8"x100" on each boloster. Also, 4- 7/8" truss rods are used.

SIDES

The sides are made of 9- 4"x4"x3'6" stake posts and mortised into 4"x4" top sills and set in stake pockets level with the deck. Seven gates are on each side made of 3- 1 1/2"x 10 1/2"x46" and bolted together with strap type hinges.

DECK DETAIL

The deck is "A" frame shape with a 6-12 pitch so that when the gates are opened the ore will automatically unload. A [illegible] and 2' above the deck support the slanted

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7.3 C-2 MEASUREMENTS

7.3 C-3 STRUCTURAL CHANGES - None

7.3 C-4 ARCHITECTUAL STYLE - None

7.3 C-5 UNIQUE FEATURES

The trucks are usually "all steel". But each truck on this gondola has a 7"x11"x48" oak beam that rides on the top of four coil springs. The steel king pin and plate is recessed into the top center of this beam.

7.3 D HISTORICAL CHARACTER

So far as is known no changes have been made since manufactured.

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CATTLE CAR

7. CONDITION OF CATTLE CAR

This cars condition is good but their is much evidence that it has been heavily used. For example, the deck is worn and slightly splintered. The underframe bolts and plates are gouged into the wood in several places. This would seem to authenticate its antiquity. The roof sheathing is in poor condition.

7.1 ALTERED OR UNALTERED

This cattle car has double studs and bracing as compared to factory specifications. See picture and drawing at the end of this section to compare the difference. The date of the alteration is unknown but the added beams are as well weathered as the originals, so it would appear that shortly after the car was placed in service sometime before 1900, the additions were made.

7.2 Does not apply

7.3 A. PHYSICAL APPEARANCE

This car has also been recently repainted the original box car red. The trucks and underframes remain to be painted.

7.3 B DISTRICT

7.3 C-1 TECHNICAL DESCRIPTION

Lt. Wt. 17,600 lbs. Capacity 20,000 lbs. The trucks underframe and deck of this car is the same as the box cars of the same carrying capacity. The sides are held in place by 24- 4"x 4 1/2"x83" beams recessed into steel stake pockets.

INTERIOR WALLS

The two ends are boarded solid inside with 1 1/2"x 5 1/2" T.& G. planks. The two longitudinal sides are boarded inside at the bottom with 1- 1 1/2"x12" then 7- 1 1/2"x5 1/2" planks spaced 2 1/2" apart to the top. The two sliding doors are made the same way

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ROOF RAFTERS AND ROOF

The tapered roof rafters and roof are the same construction as the box cars except only one layer of 3/4"x 3 1/4" T.& G. slates were used.

7.3 C-2 MEASUREMENTS

See drawing at the end of this section.

7.3 C-3 STRUCTURAL CHANGES

No structural changes are evident except the studding detailed in 7.1.

7.3 C-4 ARCHITECTURAL STYLE

Does not apply

7.3 C-5 UNIQUE FEATURES

Only one layer of roofing material was used instead of two. The result is that this roof is in poor condition and needs to be replaced. No other unique features has been found.

7.3 D HISTORICAL CHARACTER

This cattle car retains it s original historical character except for the additional studs that were added.

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CABOOSE #401

7. PHYSICAL APPEARANCE

The caboose is in fairly good condition but some repairs and replacement are needed. The decking on the 2' wide platform on both ends of the caboose need some repair work. The steel steps at both ends need minor repairs. The four running lights and two brackest on each of the four corners are missing and need to be replaced. The shower stall and coal burning stove inside needs to be replaced.

7.1 ALTERED OR UNALTERED - Altered

This caboose was originally manufactured between 1882 and 1887. In its original design it had a curved roof on all four sides. Please see drawing at the end of this section. It also had a raised section above the main roof called a "Clerestory". This clerestory had 12 very small oblong windows. On top of this was a roofwalk that only extended half way along the clerestory. It had only one ladder to the roofwalk so this meant the caboose could only be coupled on one end. Sometime later the curved roof and clerestory was removed and a slanted flat top roof installed. Also, a roofwalk was installed that ran the full length of the caboose. Other additions included another ladder and another coupler so that the caboose could be coupled and run from either end.

7.2 Does not apply

7.3 A PHYSICAL APPEARANCE

The appearance of this caboose is good because it has recently been painted both inside and outside. The outside is a box car red and the inside is light gray. This car was beautifully finished in that the four corners are rounded, the truss rod supports are curved and tapered, the window and door trim have attractive molding and the interior was equally well finished. The remodled roof is more roughly finished.

7.3 B DISTRICT

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7.3 C-1 TRUCKS TECHNICAL DESCRIPTION

The trucks are heavy duty but the bolsters are supported by six double leaf springs on each truck for easy riding.

UNDERFRAME

The construction of the underframe is similar to the box car assemblies. The bolsters and cross beams that support the truss rods and the coupler supports behind the end sills are oak.

DECKING

The decking is a single layer of 3/4"x 3 1/4" T.& G.

EXTERIOR SIDING

The exterior siding consists of 3/4"x 3 1/4" T.& G. below and beside the windows and paneling is used above the windows. The four corners are rounded.

WINDOW DETAIL

10- 21"x26", 1- L.W. each.
6- 11"x13", 1- L.W. 3 in each panel door.
2- 24"x30", 1- L.W. 1 in each front and rear doors.

DOOR DETAIL

2- Doors 24"x70", 2 panels each.
2- Sliding doors 4'x6', 3 panels each
1- Door in bulkhead 28"x70" made of a double layer of 3/4"x 3 1/4" T.& G.

INTERIOR SIDING

Bulkhead - Double layer 3/4"x 3 1/4" T.& G.
Other siding - 3/4"x 3 1/4" T.& G. on all four walls, up to and beside windows and doors. Paneled above windows.

ROOF CONSTRUCTION

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INTERIOR EQUIPMENT

Coal burning stove and coal box. Built-in desk with six drawers, 2'x4' table, two build in bunks, kitchen sink, ice box, a shower stall and wardrobe.

7.3 C-2 MEASUREMENTS

See drawing at the end of this section.

7.3 C-3 STRUCTURAL CHANGES

See Section 7.1 in this section.

7.3 C-4 ARCHITECTUAL STYLE

This caboose cannot be classified as to style but very few cabooses of this type were made. Some railroad engineers claim it was custom built.

7.3 C-5 UNIQUE FEATURES

Extensive use of oak in underframe. The remodeling which eliminated the curved roof and clerestory. The use of 12 double leaf springs in trucks to make the caboose easier riding.

7.3 D. HISTORICAL CHARACTER

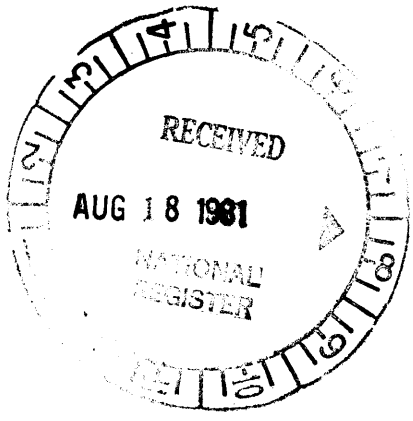
Although the roof was remodeled the rest of the caboose was not. As remodeled it is one of a kind.

I T E M # 7

" B. 2 "

D E A T H V A L L E Y R A I L R O A D

P A S S E N G E R C A R



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DEATH VALLEY RAILRAOD PASSENGER CAR "B.2"

7. DESCRIPTION AND CONDITION OF CAR

See photograph and continuation drawing at the end of this section. This car, more commonly known as the "Blue Goose", was originally built for both executive and passenger use. It was used on the Death Valley Railroad System that ran from Ryan in Death Valley to Death Valley Junction, a distance of about 25 miles. As a result the inside was beautifully finished. Oak, Gum, Douglas Fir and Sugar Pine woods were generously used on the inside. The exterior siding is all steel except doors and windows. This car is self-contained with its own gasoline engine, air brake system, rest room, heating and ventilating systems. Parts of this car has been restored but other parts will require considerable work before the restoration is completed.

WORK COMPLETED

- New roof;
- Interior refinished;
- New floor;
- All window frames, sashes and glass have been replaced;
- The exterior has been completely repainted with dark green sides and aluminum roof.

WORK TO BE DONE

- Provide a shelter to house this car;
- Reupholster seats;
- Replace two oak seats in engine room;
- Replace two back doors;
- Replace red and green signal lights;
- Overhaul trucks;
- Overhaul drive nechanism and engine;
- Replace steps;
- Replace or patch rusted metal siding.

ALTERED OR UNALTERED - Unaltered except as described in paragraph 7.3 C-3.

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7.2 Does not apply

7.3 DESCRIPTION - Present and Original

7.3 A This car was built about 1920 by the J.G. Brill Company designated as Car #22499 Serial #31, with trucks #81 N. It contains a magneto-type gasoline engine rated at about 75 horsepower. No known modifications have been made except the window frames and sills which originally were oak and were rebuilt with Douglas Fir.

7.3 B CLASSIFICATION - District

7.3 C-1 CONSTRUCTION DETAIL

The trucks were custom made by the same company that built the car body. That is, the J.G. Brill Company. The wheel diameter is 30" with sealed in roller bearings on the axles. Four sets of springs were provided for each truck. The front truck supports the drive shaft, differential gears and transmission.

UNDERFRAME

The underframe consists of four 1/4'x2"x6" channel iron beams (sills) that run the entire length of the car. Each end has two more channel iron sills that extend back four feet.

DECKING

The original decking in the engine room is the original 1"x5" T.& G.- D.F. and bolted directly to the underframe. The decking in the passenger area consists of a sub-decking 3/4"x5" T.& G.- D.F. and bolted directly to the underframe. The second layer of decking is also 3/4"x5" T.& G.- D.F. laid lengthwise to the car and nailed to the sub-deck.

EXTERIOR SHEATHING

The exterior sheathing is steel plate and riveted to bulkhead for strength.

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INTERIOR SHEATHING

The interior sheathing is the same steel plate as the exterior except the rear bulkhead which is oak and glass paneling.

INTERIOR FEATURES

The interior is equipped as follows:

- The engine room has an engineer's control area consisting of gear shift levers, clutch, engine speed levers and various gauges. Also, this room contains a coal burning water heater for heating the passenger section.

- The passenger section contains eleven-two passenger seats, a restroom and a drinking water dispenser.

ROOF CONSTRUCTION

The roof rafters are 2"x3" curved oak beams placed on three foot centers. The roof sheathing consists of 1/2"x 2 1/2" oak T.& G. bats. The bats are covered with canvas and painted aluminum.

WINDOW DETAIL

(26) 2'4"x3" D.S. - 2 L.W.
(2) 33"x3' D.S. - 2 L.W.
(1) 27"x25" D.S. - 2 L.W.

DOOR DETAIL

Engine Room: (2) 3/4"x42"x62" oak paneled sliding doors with 3- 10 1/2"x2- 1/2" S.S., 1- L.W.each.

Passenger Room: (2) 3/4"x28"x75" oak hinged doors, 1- 32"x18" D.S., 2- L.W. each.

7.3 C-2 MEASUREMENTS

See continuation drawing at the end of this section.

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7.3 C-3 STRUCTUAL CHANGES

The structual changes made in restoration is that part of the window frames and sashes were replaced with Douglas Fir instead of Oak. Then the decking in the passenger area is now a double layer of 3/4" T.& G.- D.F. whereas the original decking was one layer of 1"x5" T.& G.- D.F.

7.3 C-4 ARCHITECTUAL STYLE

Does not apply

7.3 C-5 UNIQUE FEATURES

There is ample evidence to strongly indicate that the manufacturer used plans for a "standard gauge" combination passenger and baggage car to build the Blue Goose. Radical modifications had to be made to do this. Principally, the trucks had to be made to fit a narrow gauge (3') wide track whereas the standard gauge is 4' - 8'. This resulted in the truck springs being mounted parallel to the track instead of the standard right angle construction. Then the trucks are very long for narrow gauge use. This was necessary to provide room at the front end for the engine, drive shaft and transmission. This resulted in frequent derailments until the wheel rims were made wider. The rims are now 5" wide instead of 4".

Another odd feature and an unstable one is the fact that the body of the car is three feet above the tracks. This coupled with the narrow three foot track and with a body 8' - 4" wide a very unstable condition exists. Please see the end view of the drawing at the end of this section.

The last unique feature is the heating system. It consists of a coal burning stove with a coil of 1 1/4" pipe inside. The coil is connected to two 1 1/4" pipe radiators on each side of the passenger compartment. The unique part of this heating system is that the pipe from the heater is connected to the engine water cooling system and the engine water pumps not only cools the engine as needed but also circulates the heated water through the passenger radiators. Louvers on the engine radiator controls the temperature and is operated by the engineer.

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7.3 D INTEGRITY AND HISTORICAL CHARACTER

The integrity and historical character had been and will continue to be kept as restoration work continues. The only exception so far is changing the window frame from oak to Douglas Fir and replacing the decking for a single one inch D.F. to two-three quarters inch deck layers.

ITEM #7

BOX CARS "B.3"

BOX CAR VILLAGE

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BOX CAR VILLAGE

7. DESCRIPTION AND CONDITION OF CARS

At the present time there are six box cars, #15, 23, 45,47,67 and 77. Their size and construction are identical to the box cars description shown on pages 46 to 48 inc. The only exception is that none of these cars are on trucks. They are all on wood blocks. This will be a future "Box Car Village". It will be an exact replica of such villages that once existed along the Carson & Colorado tracks at Candelaria, Nevada. These box car villages for living quarters were common in remote locations all over the United States before the turn of the century.

The box cars will eventually be made into living quarters by cutting doors and windows in each one and pationing off rooms inside. At the present time they are used for storage.

Their condition is good. All have recently been repainted a "box car" red. Some roof repair work are needed.

7.1 ALTERED OR UNALTERED -

The box cars are unaltered except for the removal of the trucks.

7.2 MOVED OR ORIGINAL SITE - Does not apply

7.3 DESCRIPTION - Present and Original

The box cars are identical to the cars described on pages 46 to 48. This includes items 7.3, A, B, C-1, C-2, C-3, C-4 and C-5.

7.3 D HISTORICAL CHARACTER

The historical character of these six box cars will be altered when they are made into a box car village. However, as stated before this village will be duplicating an actual box car village that actually existed before 1900 at Candeleria, Nevada.

BUILDING "C"

AGENT'S HOUSE

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BUILDING "C" AGENT'S HOUSE

7. DESCRIPTION AND CONDITION OF BUILDING

See Continuation Drawings at the end of this section.

The Agent's House is in good condition but some repairs are needed as follows:

- The roof has been repaired several times. Eventually a new roof will be required.
- The exterior wall will require some repair work in the near future.
- The foundation is wood and some of the wood base plates are partially deteriorated from dry rot. However, no settling can be found. Repair will be needed.
- The water pipes are old and will also have to be replaced.

7.1 The building has been altered twice. Additions were made prior to 1920. We have a letter to document this fact. But we do not know the exact dates that the two additions were made. It is not intended to try to restore this house to its original size. It would appear that to do so would destroy its historic value. These alterations will be described in detail in paragraph 7.3 A.

7.2 - The building is on its original location.

7.3 A DESCRIPTION - Present and Original

The Agent's House was built in 1883, the same as the depot. It was in continuous use until 1960. (See continuation drawing at the end of this section). Originally, it contained a livingroom, two bedrooms, a kitchen, three porches, and an outhouse located about 50' south west of the house. No dates are available as to the exact time that the building additions were made, except that it was sometime prior to 1920. A close inspection revealed beyond a question of a doubt that the first and second building additions were made at different times. A description of these additions in 7.3 C-1 under construction detail will clearly show proof of this fact. The first building addition included a new kitchen and the old kitchen was made into a dining room. The porch on the south east corner

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7.3 A DESCRIPTION - Present and Original Cont.

Evidence is available that this little room was used as an office for several years. It is now a sun parlor. Also, a full bathroom and laundry room were added.

Every effort has been made with this house the same as the depot to restore everything as it was originally. Changes necessary during restoration will be explained in section 7.3 C-1 Construction Detail.

7.3 B CLASSIFICATION

See Continuation sheet Item #3

7.3 C-1 CONSTRUCTION DETAIL - FOUNDATION DETAIL

The house sets on pillars that place the floor level about 2' above ground on the west side and about 1' above ground level on the east side. The pillars are 4"x4" and 4"x6" and set on base plates varying in size from 2"x6"x12" to 3"x8"x18". The base plates the same as the depot platform sets on the ground. As stated earlier some of these plates are about 20% deteriorated due to dry rot. The house appears to be plumb and solid because no cracks or unlevel condition can be found. The 4"x6" J.P. stringers are on 6' centers. They support 2"x8" floor joist. The first and second building additions used the same underpinning as was used on the original guilding.

All of the foundation wood was J.P. except several 4"x4" pillars, that were used to support what appears to be an old cellar about in the middle of the house. These pillars are Douglar Fir. Some of the 1"x12" boards that held the cellar wall dirt in place are still upright but others have been pushed over from the dirt walls caving in. No evidence can be found of a stairway or trap door in the floor.

FLOOR DETAIL

The sub-floor for the original house consists of 1"x6" J.P. laid diagonally to the floor joists. The first addition has no sub floor. The second building addition has two layers of regular 3/4"x3 1/2" T&G, D.F. flooring. The first layer is a right angle to the floor joist and the top layer is parallel to the floor joist. All the flooring in all of

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7.3 C-1 CONSTRUCTION DETAIL

STUDDING DETAIL

No studding was used in the original house. The exterior 1"x12" J.P. siding placed vertically and 1"x4' T&G, D.F placed horizontally in leiu of studding and outside lath and plaster completed the outside walls. The inside walls were similar except finished lumber was used. A complete detail of these walls is in section 7.3 - Unique Features. The studding for the first addition consists of standard construction with 2"x4" J.P. studding on 2' centers and 2"x4" stud plates top and bottom. The studding for the second building addition is the same as the first addition except that 2"x4" D.F. studs and plates were used.

ROOF DETAIL

All of the roof rafters are 2"x4" J.P. except the second addition, 2"x4" rafters are D.F. instead of J.P. All of the roof rafters for the original building plus the first and second additions are on 2' centers. The roof sheathing in the original building is 1"x12" J.P. spaced about 3" apart. The original building sheathing is covered with cedar shingles. The first addition roof sheathing is 1"x10" J.P. spaced about 3' apart. This sheathing is also covered with cedar shingles. The second addition roof sheathing is 1"x6" D.F. with no spacing between. The sheathing is covered with rock impregnated tar paper. The 2"x4" roof rafters on both the south-east and north-east porches are 3/4"x3 1/2" T&G D.F. instead of 1"x12" sheathing. The roof design is a gable east and west with an off set gable north and south.

EXTERIOR WALL DETAIL

The original building exterior walls are 1"x12" J.P. board 1"x3" J.P. batten. The first addition exterior walls are covered with 3/4"x4" T&G D.F. placed horizontally. The second building addition exterior walls are covered with 5" R.W. ship lap. All of the window frames are trimmed with 1"x4" D.F. The walls are painted a medium yellow and all trim is painted a light brown.

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7.3 C-1 CONSTRUCTION DETAIL

INTERIOR WALL DETAIL

As stated in section "7.3 Description Present and Original", the ceiling and most of the interior walls were badly deteriorated by a leaking roof and abuse by renters over a long period of years prior to 1964. The original kitchen, livingroom and two bedroom walls and ceiling were lath and plaster. It would have been impossible to restore the plaster to its original condition. So the lath and plaster was removed and 3/8" plaster board was installed. 3/4"x5" T&G R.W. was placed vertically from the floor to 3' up the wall on all four walls in the living room, 3/4"x2" wide batten topped the redwood panels for trim. The remaining part of the walls were covered with old fashioned flower design wall paper. The ceilings were painted an off shade white. The walls in the first addition kitchen and utility room are covered with 3/4"x5" T&G D.F. on both the walls and ceiling. The interior walls and ceiling in both rooms are painted an off shade white. The second addition bedroom interior walls and ceiling are covered with 3/8" plaster board and painted a light pink. The south east porch which is closed in is paneled with 3/4"x5" T&G R.W. on both the walls and ceiling and painted an off shade white.

CEILING JOISTS

All of the ceiling joists in the original building are 2"x6" J.P. whereas all of the ceiling joists in the two additions are 2"x4" J.P. All of the ceiling joists are on 2' centers.

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7.3 C-1 CONSTRUCTION DETAIL

WINDOW DETAIL

South east Porch	(3) 3'x3' S.S. 1-light window, 1-door window 2'x3' D.S. 2- L.W.
North west bedroom	(1) 3'x3' D.S. 2- L.W.
Parlor	(1) 3'x5' D.S. 2- L.W. (1) 3'x5' D.S. 12- L.W.
Living room	(2) 3'x5' D.S. 12- L.W.
Dining room	(1) 3'x5' D.S. 12- L.W.
Kitchen	(1) 3'x3' S.S. 1- L.W. (1) 3'x4' S.S. 1- L.W.
Utility room	(2) 2'x4' S.S. 1- L.W. (1) Door Window 2'x2' S.S. 4- L.W.

NOTE: All 3'x5' windows are framed with a 3"x4" box on all four sides on the inside of the house. This allows for cast iron window weights. The walls are solid and no other room is available.

The second building addition added another bedroom on the north west corner of the house. The adjacent bedroom was converted into a sitting room or parlor. After these additions were completed the Agent's House continued to be in use as described until 1960. Then between 1960-1964 the house was virtually abandoned. Migrants lived there from time to time and left all of their debris behind. Also during this time goats, yes, that's right, goats were stabled in the living room at nights for a few weeks.

When the museum was started in 1964 the necessary restoration work was monumental. The roof leaked badly, damaging the plaster ceiling and part of the plaster walls beyond repair. The ceiling and part of the walls had to be replaced with 3/8" plasterboard. Then many hours of scrubbing, painting and repairing ensued before the job was done. To visit this house today it is hard to believe what a wonderful job has been done in restoring this building. It is truly the showplace of the Laws Railroad Museum.

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7.3 C-1 CONSTRUCTION DETAIL

PRESENT USAGE OF ROOMS

The rooms are used as a repository for antique furnishings duplicating as closely as possible the way the house would have been furnished before the turn of the century. The living room now contains a gliding rocking chair and a regular rocking chair, a solid oak library table, a folding bed with original coil springs and mattresses and a host of table ornaments. A wall shelf contains a 98 year old Adamantine Seth Thomas clock. The north west bedroom has an old fachioned bed and dresser, two bed chambers, (bed chambers are over 100 years old.)

The parlor contains a very old foot driven organ in working condition, two human hair memory wreaths in shadow boxes with elaborate frames, an antique platform rocking chair, assorted pictures, a very ornate oval rocking chair, a chiffonier made of solid walnut with four drawers and assorted pictures.

The bedroom in the center of the house has a collection of very old sewing machines, a display case of antique jewelry such as hat pins, ornamental combs, beaded handbags and many others. There is also a very old vanity dresser with an antique assortment of manicure and grooming items plus a jewelry case. Also two bedroom lamps are on each side of the dresser. The wardrobe on the north side has a collection of hoop skirts, old fashioned dresses, hats, button shoes and other miscellaneous wearing apparel all dating back before the turn of the century.

The dining room has an old fashioned dining table and four chairs made of solid oak. There are two locked china closets in this room. They are filled with crystal glasses, china plates, cut glass pitcher, milk glass items, and cups and saucers, an old hand crank phonograph, a rocking chair and a wood stove.

The kitchen is equipped with a very old and ornate coal burning cook stove, a highchair, a kitchen table and chairs, the sink has a drain board and a hand operated water pump with its own well directly underneath in the basement.

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PRESENT USAGE OF ROOMS CONT.

The bathroom is standard except the tub has claw feet. Also the utility room has a water heater and clothes washing equipment and storage cabinets.

The south east porch contains a desk with various antiques on display including two "Wool Carders" used to comb wool preparatory to spinning into yarn. These carders were brought west by wagon train about 1860.

DOOR DETAIL

Living room	2- 4 panel door
Center bedroom	1- with glass window 1-L.W. and 2 panels
Dining room	2- 5 panel doors
Kitchen	1- 5 panel door
Utility room	1- with glass window 1-L.W. and 2 panels

ELECTRICAL WIRING DETAIL

This building has been completely rewired to meet all National Board of Fire Underwriters, State and County wiring codes. Conduit and Romex has been used throughout.

PLUMBING DETAIL

The old original black iron and galvanized iron water pipes are still in use. Eventually, all of the hot and cold water lines will have to be replaced. The drain pipes in use are new plastic with a "S CH-40" rating. Some of the old iron drain pipes are still in place but badly rusted and abandoned.

7.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

7.3 C-3 CHANGES

The most important change was the removal of the lath and plaster from the walls and ceiling and replaced with 3/8" plaster board. The details of this change had to be covered in

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7.3 C-4 ARCHITECTURAL STYLE

This again is a typical railroad design. Hundreds, the same or similar, have been built across the United States. The original architect is unknown.

7.3 C-5 UNIQUE FEATURES

The most unique feature of this building is the wall construction in the original building for both outside walls and inside partitions. Please see continuation drawing at the end of this section.

How these walls were put together is a matter of conjecture. One most plausable method could have been to lay out a whole wall on the sub floor, cut out openings for the doors and windows, nail together and then several men push the completed wall into an upright position. Another mystery is how the lath for the plaster walls was nailed down so plaster would stick. Lath was normally laid with about a quarter inch between each one. Plaster was pushed through these cracks to anchor the plaster to the lath. If the lath was nailed to a solid wall how could a strong bond be created? Probably this is why that restoration of the plaster walls was impossible.

- Another odd feature is the generous use of redwood on the inside walls. If T&G finished redwood was available for inside walls why was it not used where it should have been in the depot building for pillars and stringers that rested on the ground? It can only be speculated as discussed in other sections, that local Jefferey Pine was plentiful whereas redwood had to be shipped from the north west or at least from Northern California.

- Still another oddity is the use of regular 3/4"x3 1/2" T&G D.F. flooring for roof sheathing on both porches.

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7.3 C-5 UNIQUE FEATURES CONT.

A unique feature was created as a result of the exterior walls being solid wood. This left no room on each side of the window frames for the cast iron window lift weights. A box apparently 3"x4" was placed on the sides of the window frame on the interior wall to provide room for the cast iron weights.

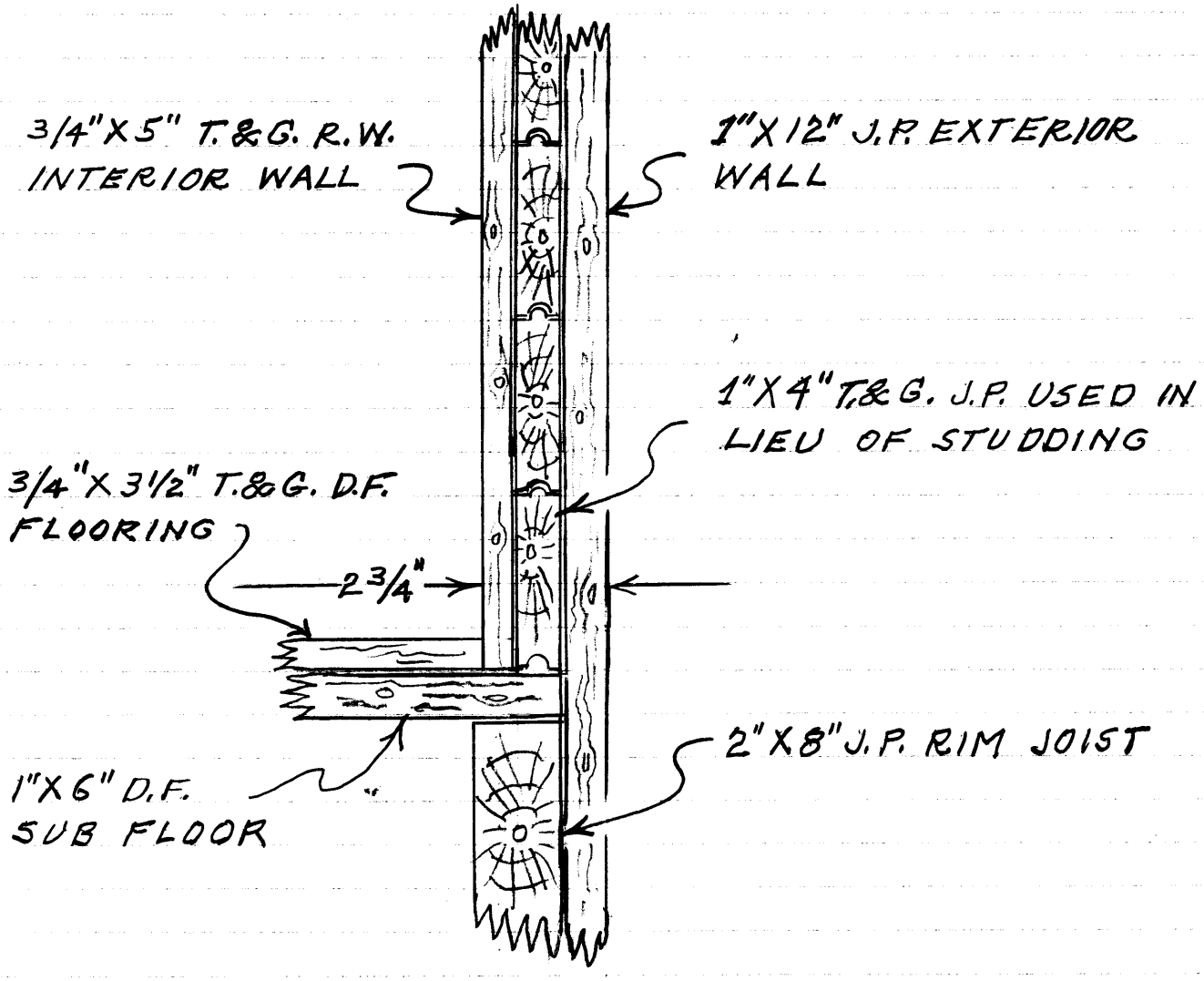
7.3 D HISTORIC CHARACTER

Since the two building additions were made prior to 1920 it would seem that this structure could be treated as a whole so far as the degree it has retained its historical character. A strong effort has been made to refurnish this house as it would have been before 1900. It is also used as a repository for a wide variety of antiques for display purpose. The display of antiques is of course non-conforming as to historical character.

CONT. DRWG. ITEM #7

TYPICAL WALL CONSTRUCTION

CROSS SECTION VIEW



NOTE- INTERIOR WALLS WERE MADE THE SAME WAY EXCEPT THAT BOTH SIDES WERE T.&G. R.W. OR LATH AND PLASTER.

ITEM #7

STRUCTURE "D"

WATER TOWER

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STRUCTURE "D" WATER TOWER

7. DESCRIPTION AND CONDITION OF STRUCTURE

See Continuation Drawing at the end of this section.

The foundation, steel pillars, the water pipes, stringers and floor joists are in very good condition. But the tank itself is in poor condition. Substantial repairs ~~are~~ will be necessary very soon. The tank is made of redwood floor and sides. It has not been used since 1960. As a result the wood has shrunk. Even though the exterior steel bands, that hold the staves in place, have been tightened several times and reenforcing beams have been placed inside, the staves are pushing inward in several places. Also the tank staves lean a few inches to the north. Further, there are at least 15 staves out of 114 that are seriously deteriorated. Both the water tank and steel pillars are painted black.

7.1 ALTERATIONS

No alterations have been made since the water tower was built in 1883.

7.2 LOCATION

The structure is on its original location.

7.3 A DESCRIPTION - Present and original

This water tower supplied water for steam locomotives from 1883 to 1960, a span of 77 years. Since no known changes were made from the time it was built it appears that a general description for both original and present would be sufficient.

The water tower consists of concrete foundation pillars, steel pipe pillars between the foundation and the floor support beams and floor joists. Three big stringers 10" x12" support 3"x10" floor joists on 12" centers. The tank itself is made of redwood T&G staves and flooring. The tank was supplied with water from a well and pump located 100' to the east of the tower. The pump and water tower are connected by a 4" steel pipe. Also a 2" steel pipe runs all the way to the depot located 780' to the north. Various 1" pipe lines take off from this 2" line. Regretably it is all iron pipe and is so badly deteriorated that it is abandoned almost completely. There is no intent to ever fill the tank with water again.

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7.3 A DESCRIPTION - Present and Original Cont.

The cost of making it water tight would be prohibitive. The top of the tank is covered with galvanized sheeting.

7.3 B CLASSIFICATION

See Continuation Sheet Item #3

7.3 C-1 CONSTRUCTION DETAIL

FOUNDATION AND STEEL PILLAR DETAIL

The foundation consists of seven 2'x2'x4' deep concrete pillars. The foundation pillars support seven specially made 5" outside diameter steel pillars 10'-8" long. They are flanged top and bottom to support 1"x12"x12" steel plates, four of the steel pillars are cross braced with 1" steel rods.

TANK FLOOR DETAIL

The steel pillars support 3-10"x12" stringers on 6' centers. The stringers support 3"x10" floor joists on 12" centers. The flooring consists of 3"x6" T&G R.W. and are mortised into the stave siding.

SIDING DETAIL

The sides are 3"x6" T&G R.W. tightly held together by steel bands made of 1/4"x3" strap iron with take up bolts riveted to both ends.

ROOF DETAIL

The roof rafters are 2"x6" J.P. on 2' centers at the outside perimeter of the tank and coverging on an octagon shaped group of 2"x6" J.P. about 30" diameter. The roof pitch is about 2"x12". The galvanized sheet iron is nailed directly to the roof rafters. There is a square inspection hole in the roof about 2'x2' in size. A ladder used to be hung from this inspection hole to the ground. It has been removed for safety.

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7.3 C-1 CONSTRUCTION DETAIL CONT.

LOCOMOTIVE TENDER FILLING DETAIL

A valve in the bottom of the tank opens into a ten inch pipe with a swivel joint. The valve automatically opens and closes when the fill pipe is moved up or down. This is for the purpose of allowing the train to go by but yet close enough so that the fireman or engineer can pull the pipe out and down for quickly filling the water tank in the tender. This pipe is heavy so a group of chains, pulleys and weights assist in lowering or raising the fill pipe.

7.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

7.3 C-3 CHANGES

- The water tower roof obviously was added a number of years after the tank was built because galvanized iron of the type used was not made in 1883. No date is available as to when the roof was added.
- The ladder that hung from the top of the tank to the ground was in poor condition and unsafe to use. Also, there was concern that visitors might try to climb this ladder and cause a serious accident. Therefore it was removed.
- When electricity became available in 1915 an electric float switch was installed on the east side of the tank. A two wire circuit was strung aerially between the tank and the pump house to automatically turn the pump on and off.

7.3 C-4 ARCHITECTURAL STYLE

This tank and tower is a standard design (found) all over the country.

7.3 C-5 UNIQUE FEATURES

Even though years ago there were a large number of these tanks beside railroad tracks from coast to coast and highly standardized there are a few very unique engineered features that should be explained.

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7.3 C-5 UNIQUE FEATURES CONT.

- Please see the foundation detail at the end of this section. Please note that all seven pillars are exactly on seven foot (7') centers in all directions from the center pillar and the same between the rim pillars. This would make it very easy for workmen that possibly never had seen one of these towers to set the foundation pillars correctly with very little instruction. When workmen were hundreds or perhaps thousands of miles from headquarters this easily understood design is nothing short of genius on the part of the designer.
- Another unique feature is the solid cast steel pillars that support the tank itself. Each pillar is a hollow tube 5" in diameter and 10'-8" long, including 1"x12"x12" steel plates with 8 re-enforcing flanges at both ends. All of this was made in one solid casting. Again the same as the foundation measurement it made it very easy for imexperienced workmen to assemble.
- These tanks are becoming very scarce. Where at one time there were tens of thousands of these tanks in existance, today there are less than 500.

7.3 D HISTORICAL CHARACTER

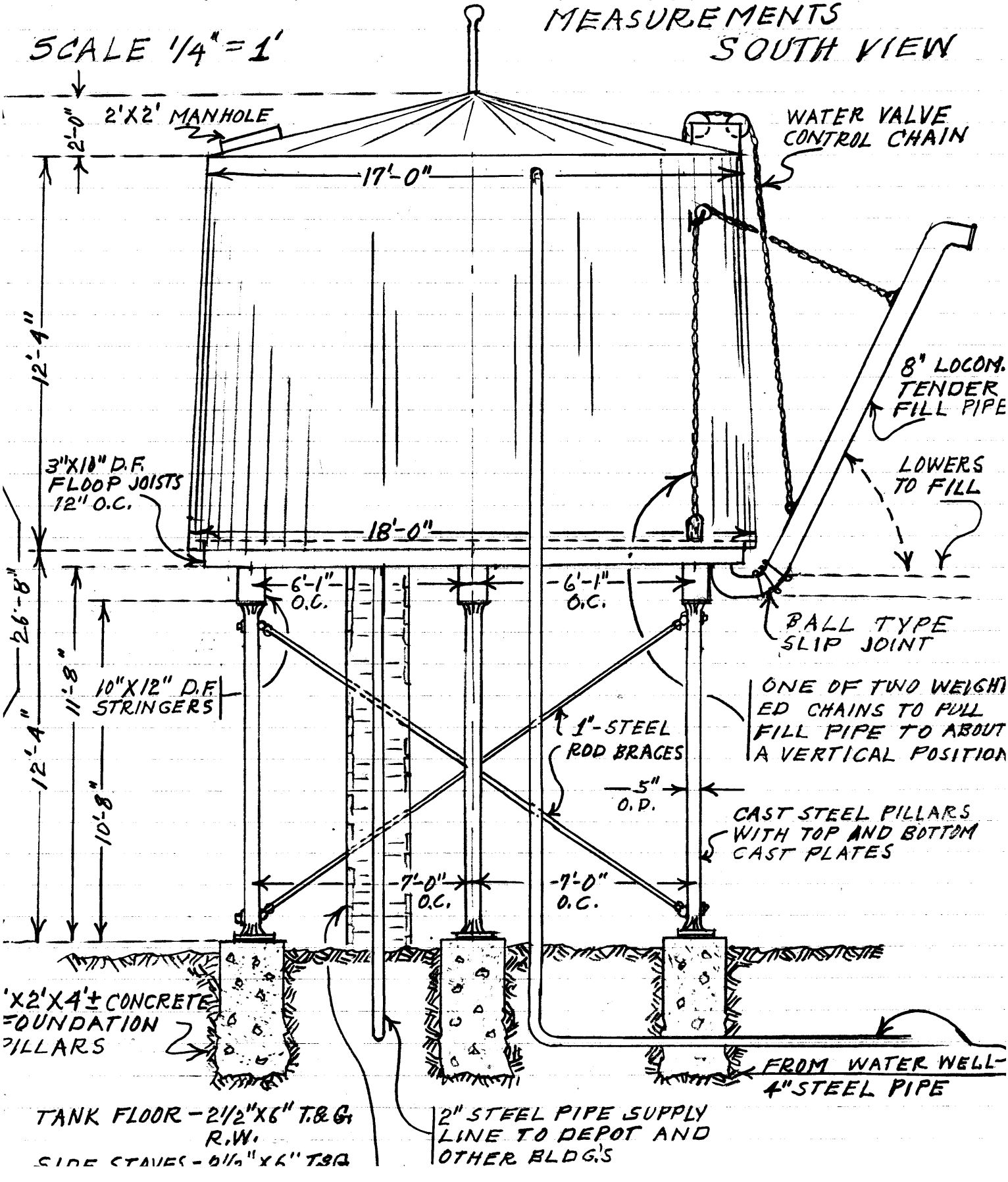
Except for the deteriorated condition of the side staves and the removal of the ladder the tank is exactly as it was since it was built in 1883. There is one exception, When electricity became available about 1915, an electric automatic float switch was installed on the top and inside the tank to control the starting and stopping of the water pump.

It is intended to make all necessary repairs to the tank staves and bands. It is also necessary to replace the ladder for maintenance purposes.

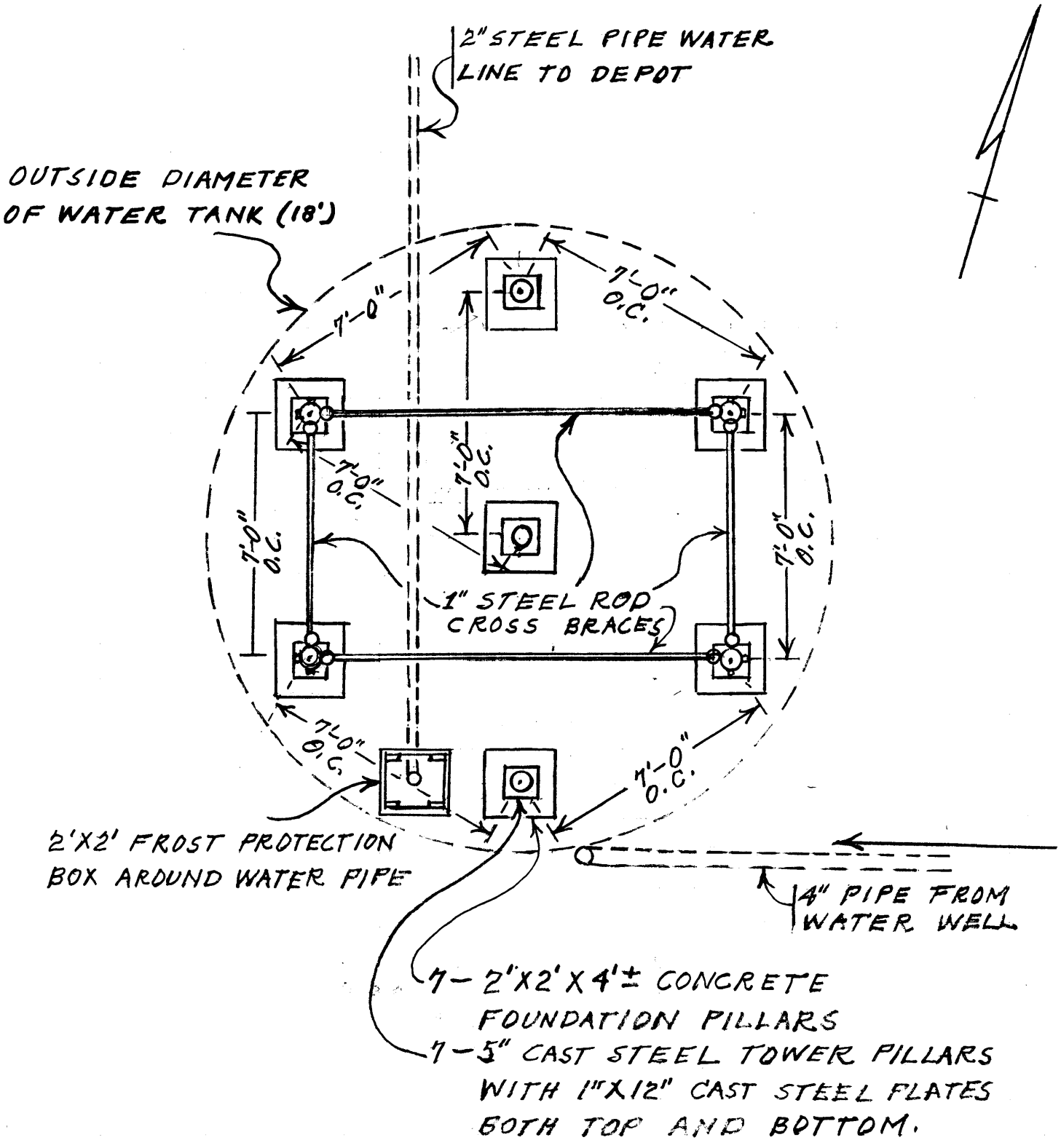
WATER TOWER AND TANK MEASUREMENTS

SCALE 1/4" = 1'

SOUTH VIEW



WATER TOWER FOUNDATION AND PILLAR BRACE DETAIL



ITEM #7

STRUCTURE "E"

WATER PUMP HOUSE

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STRUCTURE "E" WATER PUMP HOUSE

7. DESCRIPTION AND CONDITION OF STRUCTURE

See Continuation Drawing at the end of this section.

STRUCTURE CONDITION

The pump house is in very good condition except the glass for three windows need replacing. Also the windmill that was originally used to pump water was blown off the top of the structure during "The big blow of 1923". It will require extensive repair work to be operational again. The windmill will be detailed in paragraph 7.3 A.

.1 ALTERATIONS

The only alteration that was made since the structure was built in 1883 was to convert from windmill pumping to electric pumping when electricity became available about 1915.

7.2 LOCATION

The structure is on its original location.

7.3 DESCRIPTION - Present and Original

7.3 A PHYSICAL APPEARANCE

The original well, pump house and derrick was built in 1883. Water was pumped by windmill because it was the only method avialable at the time. The structure at that time consisted of a well 460' deep with an 12" steel casing, a pump house 12'x 16' surrounding the well, a wood frame derrick 37'-6" high and a windmill mounted on top which added another 10' to the overall height. When the windmill was blown off the derrick by heavy winds in 1923 several of the blades were bent or destroyed, part of the steel bracing was broken and the wood base needs replacement. Fortunately, the gear box and gears were not damaged. Therefore, a 100% restoration can be made. Except that even though workable it will not be used to pump water. The reason being that metered water, supplied by a water system owned and operated by the City of Los Angeles, Department of Water & Power is very expensive and plans are

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3 A PHYSICAL APPEARANCE CONT.

A hand operated hoist permanently mounted on the interior east side of the building was part of the equipment.

About 1915 electric power became available, an electric motor driven pump was installed. This assemble consisted of a power panel, automatic start and stop mechanism so arranged that a float switch in the water tower controlled its operation. Further, a 5 horsepower motor, drive shaft and pump bowels were installed at the same time.

The entire structure except for doors and windows are covered with galvanized corrugated sheet iron. This probably explains why the interior is in exceptionally good condition. The sheet iron is trimmed with 3/4"x5" D.F. batten. The sheet iron is painted a medium yellow and the wood trim a light brown.

3 B CLASSIFICATION

See Continuation sheet Item #3

3 C-1 CONSTRUCTION DETAIL - FOUNDATION AND FLOOR DETAIL.

The pump house rests on a heavy concrete floor. It consists of a 12" ± x12" ± rim concrete plus four concrete pillars 2'x2'x4' ± to support the derrick. All of this is covered with not less than a 4" concrete floor. 4"x4"x1/2" angle iron is buried into the four concrete pillars to support the four corners of the derrick framework.

STUDDING DETAIL

All of the studding and stud plates are 2"x4" J.P. The studding is on 2' centers. The bottom stud plate serves as a mud sill. The studs are 12' high. Horizontal 2"x4" D.F. pieces are placed between the studding 4' above floor level for corrugated sheet iron support.

ROOF RAFTER AND ROOF DETAIL

A very small roof encloses the gap between the studding and the derrick framework. Short 2"x4" J.P. roof rafters are used for this purpose. They average 20" long on the north west and south sides and 4' long on the east side. All are on 2' centers. Corrugated iron is nailed directly to the rafters.

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3 C-1 CONSTRUCTION DETAIL CONT.

ROOF RAFTER AND ROOF DETAIL CONT.

The top of the derrick is flat and is covered with the remains of 2"x12" J.P. boards that once supported the windmill. These boards need to be covered with roofing material of some kind to protect the equipment of the ground floor.

EXTERIOR WALL DETAIL

The exterior walls are covered with corrugated sheet iron. The sheet iron is nailed directly to the studding. The corners of the building, the doors and window are trimmed with 3/4"x5" D.F. batten.

INTERIOR WALL DETAIL

The studding and exterior corrugated sheet iron are exposed to the interior on all four sides. No inside wall covering was ever installed.

WINDOW DETAIL

Pump House	3- 3'x5' D.S., 4- L.W.
Sliding Doors	2- 18"x18" S.S. 1- L.W.
Top of Derrick	1- 2'x3' D.S, 2- L.W.

DOOR DETAIL

Two sliding doors located on the west side of the pump house provide a wide opening to move machinery in and out. The doors are made of 3/4"x3 1/2" T&G D.F. flooring nailed together with 3/4"x5 1/2" D.F. battens.

ELECTRICAL WIRING

The only electricity ever used in this structure was for the water pump motor and its controls. It is a combination 115/440 volt, 100 amperes, single and 3 phase alternating current installation. The switching equipment consists of a main disconnect switch with fuses and an automatic starter switch. These switches are connected to a 5 H.P. water pump motor. All wiring is in conduit except one pair of wires that run aerially from the derrick to the top of the water tower and is connected to a float switch.

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7.3 C-1 CONSTRUCTION DETAIL CONT.

PLUMBING DETAIL

The only pipe in this building is the 12" well casing and underground 4" water line from the pump house to the water tower. It is badly rusted and no longer usable. Incidently, the same deteriorated condition exists with the original 2" and 1" iron pipe lines installed in 1883. They are unusable and have been replaced with new plastic and polyurethane pipes.

7.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

7.3 C-3 CHANGES

As stated earlier, originally, water was pumped by a windmill located on top of the derrick. About 1915 electricity became available and an electric motor type pump was installed. It consists of a 5 horsepower motor, a drive shaft and pump bowels. The old windmill plunger type pump was removed at the same time but the windmill itself was left in place only to be blown down in 1923. No other known structural changes have taken place since the original installation in 1883.

7.3 C-4 ARCHITECTURAL STYLE

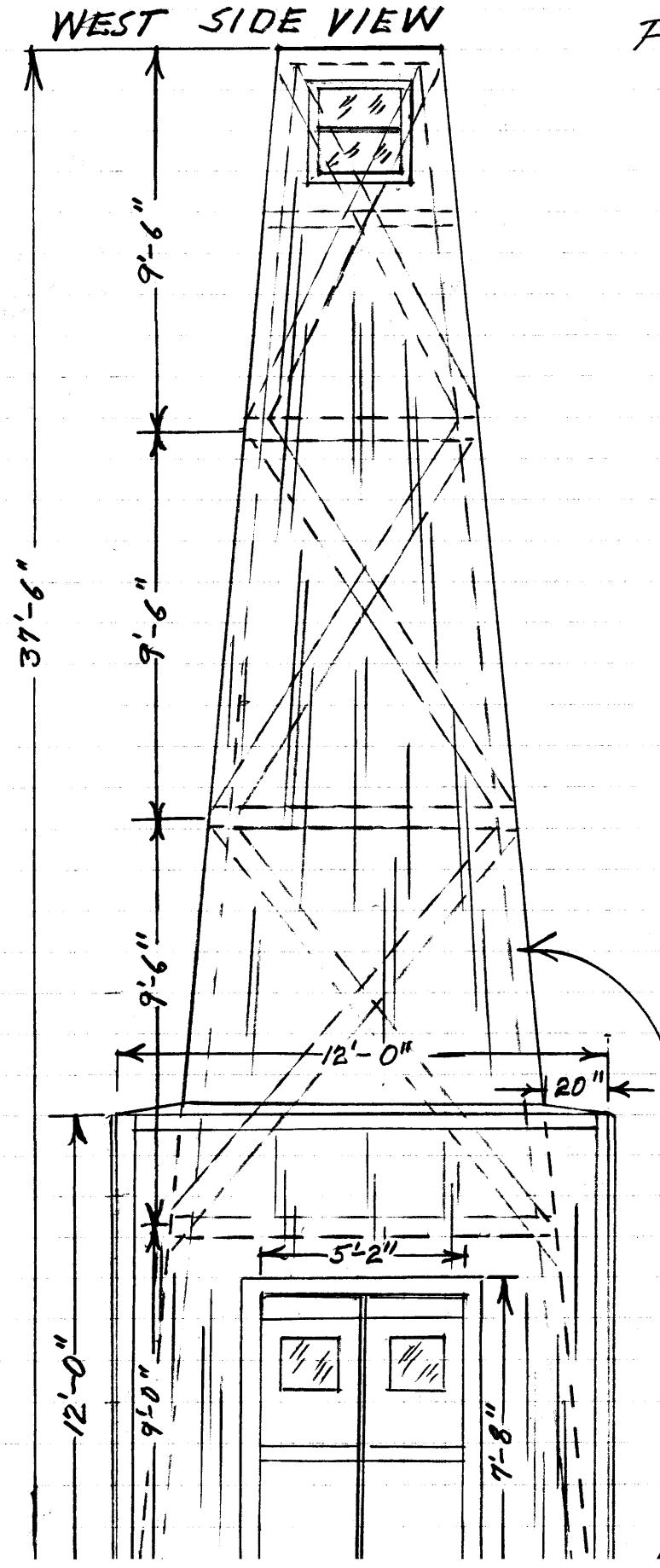
None

7.3 C-5 UNIQUE DETAIL

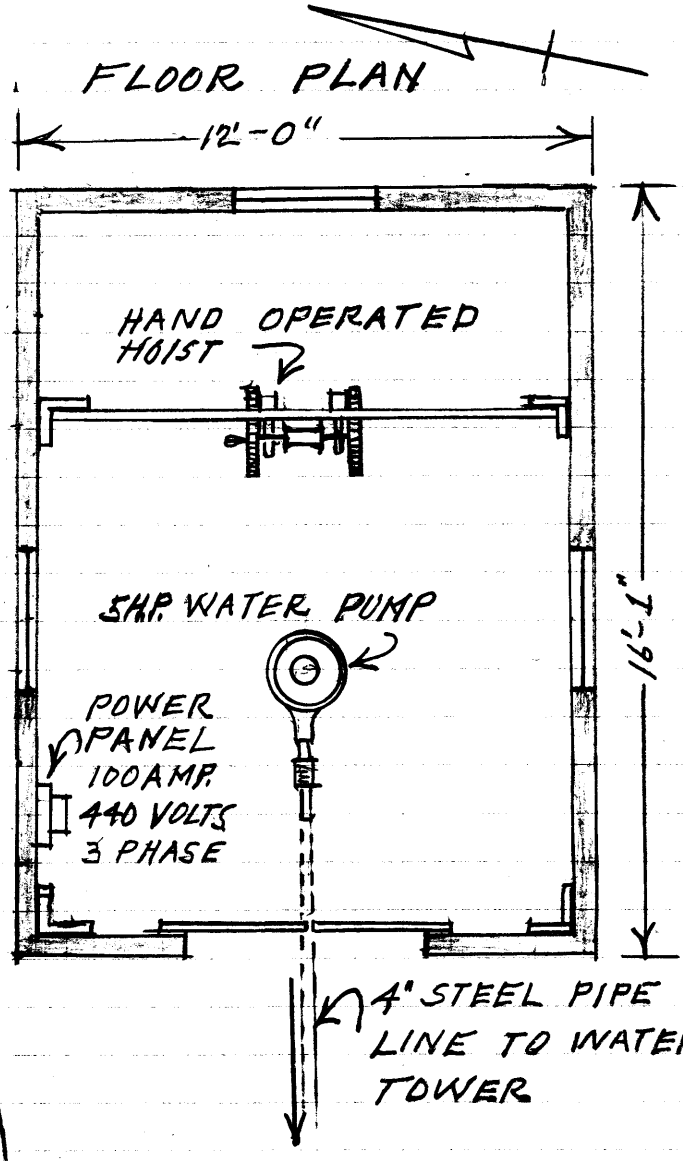
None

7.3 D HISTORICAL CHARACTER

The water pump house has not been altered since it was built in 1883, except that the windmill pump was replaced with an electric pump. When the windmill is repaired it will outwardly appear exactly as it was in 1883. If the well is activated again the visable 5 H.P. pump motor, drive shaft and bowels will be replaced with a "submersible pump". In this way nothing will show outside the well casing and it will be easy enough to conceal the electric control panel. Thus, the interior will also look the same as it did in 1883.



PUMP HOUSE (WATER)
MEASUREMENTS



WELL DERRICK FOR WELL MAINT. & REPAIR COVERED WITH CORRUGATED SHEET IRON.

4"X4"X½" ANGLE IRON DERRICK SUPPORTS IN CONCRETE

STRUCTURE "F"
OIL TANK TOWER

STRUCTURE "G"
OIL PUMP HOUSE

STRUCTURE "G.I"
I5,000 BBL OIL TANK

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GENERAL

See Continuation Drawing at the end of this section. It is necessary to deviate from the regular Item #7 outline in order to give an explanation of how the elevated oil tank ("F"), the oil Pump house ("G") and the ground level oil tank ("G.1") operated as a coordinated unit. A typical operation follows:

- Tank cars were switched to a railroad siding, connected to a drain line, one car at a time;
- A ram type steam engine pumped the oil either into the large 15,000 barrel oil tank or into the elevated oil tank as required;
- When the locomotive tender required oil, the oil fill pipe was lowered to a fill hatch on the tender and with a big 8" pipe quickly filled the tender by gravity flow from the elevated oil tank;
- Since cold weather thickened the oil to a molasses consistency both tanks were heated from the steam boiler in the oil pump house. Live steam was run through coils of pipe inside both tanks. Asbestos insulated pipes connected the steam boiler to the tanks.
- The oil pump house operator controlled the whole operation by the use of an elaborate system of valves.

STRUCTURE "F" OIL TANK TOWER

7. DESCRIPTION AND CONDITION OF STRUCTURE

See Continuation Drawing at the end of this section.

The concrete foundation, pillars, stringers, cross braces, locomotive tender fill pipe assembly, 8" oil and 2" steam pipes and the tank itself are all in good condition.

The pipe housing below the south end of the tower that encloses the 8" pipe line needs repair. The top four feet has fallen off and the rest of the housing needs to be renailed. The asbestos covering on the steam line needs to be replaced in its entirety. The pipe housing on top of the tank needs to be renailed. Also, some repair work is necessary on the platform and guard rail. The wood ladder from the tank to the ground has been removed because it was in poor condition and also we were concerned for the safety of visitors that

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.1 ALTERATIONS

There are no known records of any alterations since the oil tank tower was built about 1905.

.2 LOCATION

The structure is on its original location.

.3 DESCRIPTION - Present and Original

This oil tank tower refueled various locomotive tenders several thousand times between 1905 and 1940. After the railroad track was salvaged in 1940 between Laws, California., and Mina, Nevada., to help in the war effort refueling was all done at Keeler, California. Consequently, the oil tanks at Laws were no longer needed.

The oil tank mounted on wood structure assemblies has an 8" pipe line connected to the south end tank bottom. This line was used to both fill and empty the tank. This operation was regulated by a series of gate valves and steam operated oil pump. Also, oil could flow out of the tank by gravity to fill a locomotive tender.

Since freezing weather is common at Laws during the winter months steam lines were placed in the bottom of the tank to keep the oil solvent enough to flow easily.

.3 B CLASSIFICATION

See Continuation sheet Item #3

.3 C-1 CONSTRUCTION DETAIL

FOUNDATION AND PILLAR DETAIL

The oil tank tower consists of concrete foundation 14"x15"x3' ± for all four of wood frame pillar assemblies that support the tank. The pillar assemblies consist of a bottom plate, three pillars, two top plated, and 3"x8" cross braces in all four directions. The tank rests on top of these four pillars assemblies. All of the plates and pillars are 8"x9 1/2" D.F. beams.

The 10'x33' oil tank is made of 1/4" riveted steel plates. It has a 10" drain hole in the middle of the bottom and another 8" pipe flange on the south end bottom of the tank.

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FOUNDATION AND PILLAR DETAIL CONT.

The 8" pipe flange connects to an 8" steel pipe that connects to the steam operated oil pump in the oil pump house and also to the locomotive tender oil fill pipe.

The steam lines inside the tank consists of about 200' of 3/4" steel pipe laid parallel to one another at the bottom of the tank. These 3/4" pipes are three separate units supplied by on 2" steam pipe line from the boiler in the oil pump house.

A steel ring ladder from the top of the tank to the tank bottom is still in place. The wood ladder to the ground has been removed. There is also a wood work platform and guard rail on top of the tank in the middle.

.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

.3 C-3 CHANGES

No known changes were made on the oil tank tower from the time it was built until the present time, except the wood ladder which was removed for safety reasons.

.3 C-4 ARCHITECTURAL STYLE

This oil tank tower is a standard design for railroads all over the country.

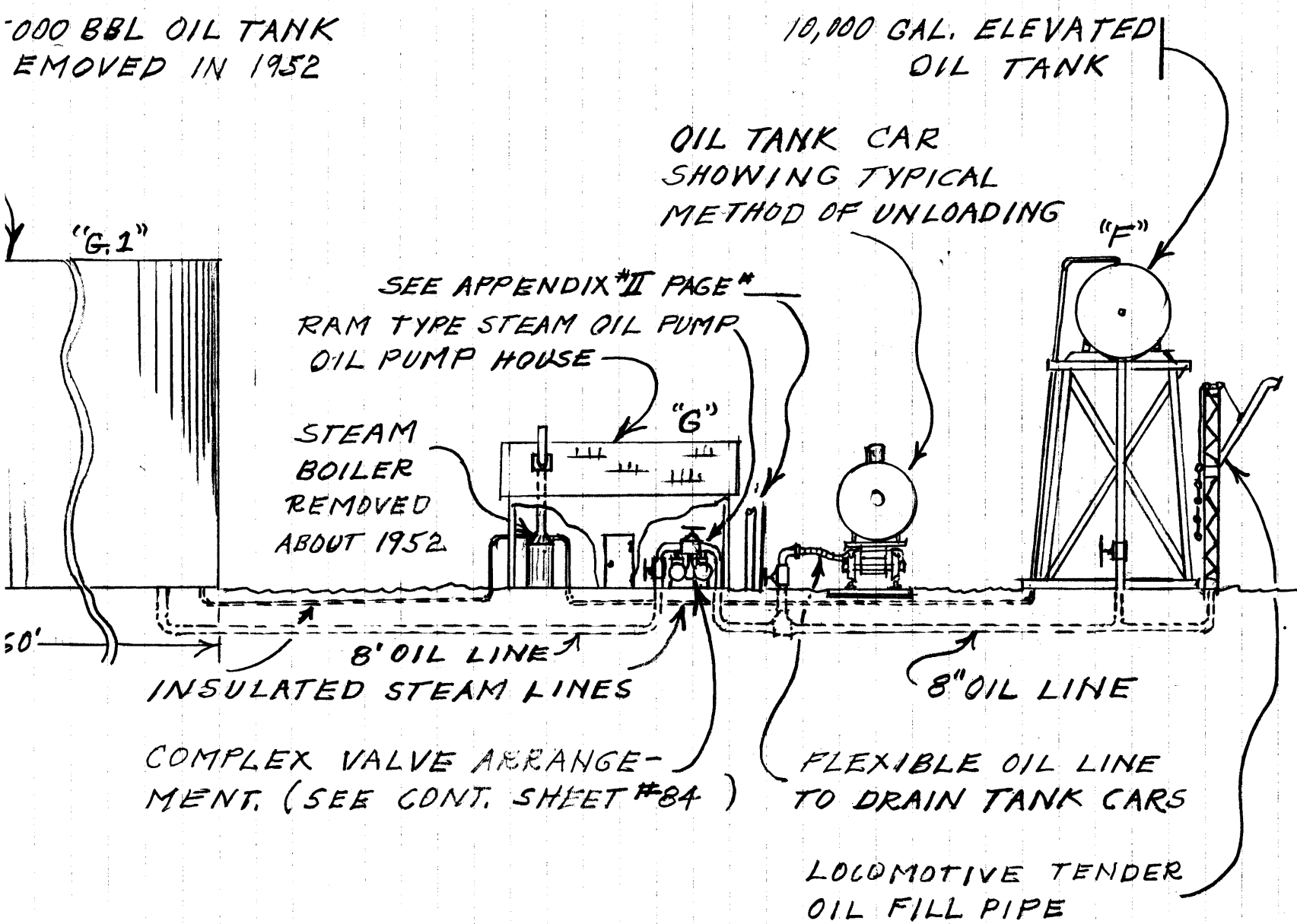
.3 C-5 UNIQUE FEATURES

No unique features have been found about this oil tank tower.

.3 D HISTORICAL CHARACTER

No structual changes have been made on this oil tank tower since it was built about 1905. The only change that has been made was to remove and store the wood ladder for safety and to prevent children or adults from climbing to the top of the tank.

NOT TO SCALE



CONT. DRWG. ITEM #7
STRUCTURES "F", "G" & "G.1"

BUILDING "G"

OIL PUMP HOUSE

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BUILDING "G" OIL PUMP HOUSE

7. DESCRIPTION AND CONDITION OF STRUCTURE

See Continuation Drawing at the end of this section.

The oil pump house was the heart of the railroad oil storage and locomotive tender refueling operation. The pump house was equipped between 1905 and 1950 with a vertical steam boiler, a ram type steam driven oil pump, cupboards for housing tools for repair and maintenance of the whole complex oil system and a small wall type desk for paperwork. Also, there is an elaborate arrangement of 2", 4", 6" and 8" pipes with gate valves so arranged that oil could be pumped in or out, from one tank to another or empty incoming tank cars.

CONDITION OF STRUCTURE

The pump house is all wood except the foundation which is concrete.

- The foundation, studding upper and lower stud plates and exterior siding is in good condition;
- The roof rafters are all good except two that are partially burned from excessive heat from the steam boiler, and should be replaced. The roof sheathing is slightly charred around the two roof rafters but need not be replaced. The wooden roof sheathing is blackened from long years of a smokey steam boiler operation;
- The steam boiler was removed along with the large oil storage tank about 1952. A strong effort is being made to replace this boiler and re-connect part of the steam lines;
- Since the facility was not in use between 1940 and 1952 considerable looting took place. The old-fashioned knob and tube wiring was removed except for a few insulators, the 3'x5' windows were removed and the top of the desk was taken.
- The roof is covered with cedar shingles and is in fair to poor condition. These shingles should be replaced.
- The windows have been replaced with a 3'x4' size instead of a 3'x5' size. The correct size of windows should be installed.
- The cement floor is badly deteriorated and should be

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CONDITION OF STRUCTURE CONT.

- The inside of the building was painted box car red. But time and smoke has almost completely obliterated the paint. Repainting is necessary.
- The two doors, one sliding and one hinged are in fair condition and need some repair. The same is true of the four window shutters.

.1 ALTERATIONS

There were no known alterations from the original design except for the looting and removal of the steam boiler.

.2 LOCATION

This structure is on its original location.

.3 A DESCRIPTION - Present and Original

See Item #7, Page 107

.3 B CLASSIFICATION

See Continuation Sheet Item #3

.3 C-1 CONSTRUCTION DETAIL

This oil pump house is the best and most ruggedly built structure on the whole museum site. The description of construction and unique features will show why.

FOUNDATION DETAIL

The foundation on all four rims of the structure are 16" wide and 18" ± deep concrete except on the south east corner. A sump for pipe connections is 4'x4'x5' and is 3' inside and 1' outside of the building. The walls of this sump are from 4" to 6" thick concrete. There is also a 41"x25"x2' ± deep base for the steam engine oil pump. The base sets about 5" above floor level.

FLOOR DETAIL

Originally, a 3" floor was laid around the pump base and also there was a floor or base of sorts under the steam boiler but most of the floor was broken and removed when the

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.3 C-1 CONSTRUCTION DETAIL CONT.

STUDDING DETAIL

All of the studding is 2"x4" D.F. on 2' centers. The bottom stud plate is 2"x4" D.F. and also serves as a mud sill. The top stud plate is doubled 2"x4" D.F. There is no inside wall so the studs, inside of the exterior siding, the roof sheathing is exposed on the inside.

ROOF DETAIL

The roof rafters are 2"x4" D.F. on 2' centers. The roof sheathing is 3/4"x11 1/2" D.F. The roof covering is cedar shingles.

EXTERIOR WALL DETAIL

The exterior walls consist of 3/4"x11 1/2" D.F. siding and is covered by 3/4"x5 1/2" D.F. shiplap. This provides a unique feature for the corners, windows, and door trim. This feature will be detailed under unique features. The exterior siding and trim is painted a medium yellow but is so badly deteriorated that several coats of paint will be necessary to restore. The door, window and eve trim is a light brown.

INTERIOR WALL DETAIL

None

WINDOW DETAIL

Present (4) 3'x4' S.S. 4- L.W.
Original (4) 3'x5' S.S. 4- L.W.

DOOR DETAIL

One 4'x8' sliding door is located on the south side of the building. It is made of 3/4"x3 1/2" T&G D.F. and held together with 3-3/4"x5? batten. Another 32"x7'-10" hinged door and made the same as the sliding door is located on the south side of the building.

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.3 C-1 CONSTRUCTION DETAIL CONT.

ELECTRICAL WIRING DETAIL

Electricity was furnished by an aerial circuit from the water pump house to the water tower and on to the oil pump house. It was the old outdated knob and tube open wiring. Even though the wiring, light fixtures and switches were looted some of the porcelain knobs are still in place.

PLUMBING DETAIL

The oil pipe lines and gate valves ranging in size from 2' to 8" all appear to be in good condition. But the steam pipe lines have been partially removed and also about 50% of the asbestos insulation has been removed. The steam pipes that remain appear to be in good condition. The ram steam engine oil pump would need a good overhaul to make it operative but it is complete and no doubt could operate efficiently again.

.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

.3 C-3 CHANGES

Except for the removal of the steam boiler and the looting no changes have been made since the original installation was made.

.3 C-4 ARCHITECTURAL STYLE

N/A

.3 C-5 UNIQUE FEATURES

The foundation has a very heavy 16"x18" rim foundation and an equally heavy steam oil pump and steam boiler vases. It is very odd indeed, that so small a building would require so heavy a foundation.

Another unique feature is the fact that this building is the most ruggedly and well built of all of the buildings on the museum site. The exterior double thick siding for ruggedness and the boxed cornice finish is exceptionally well done

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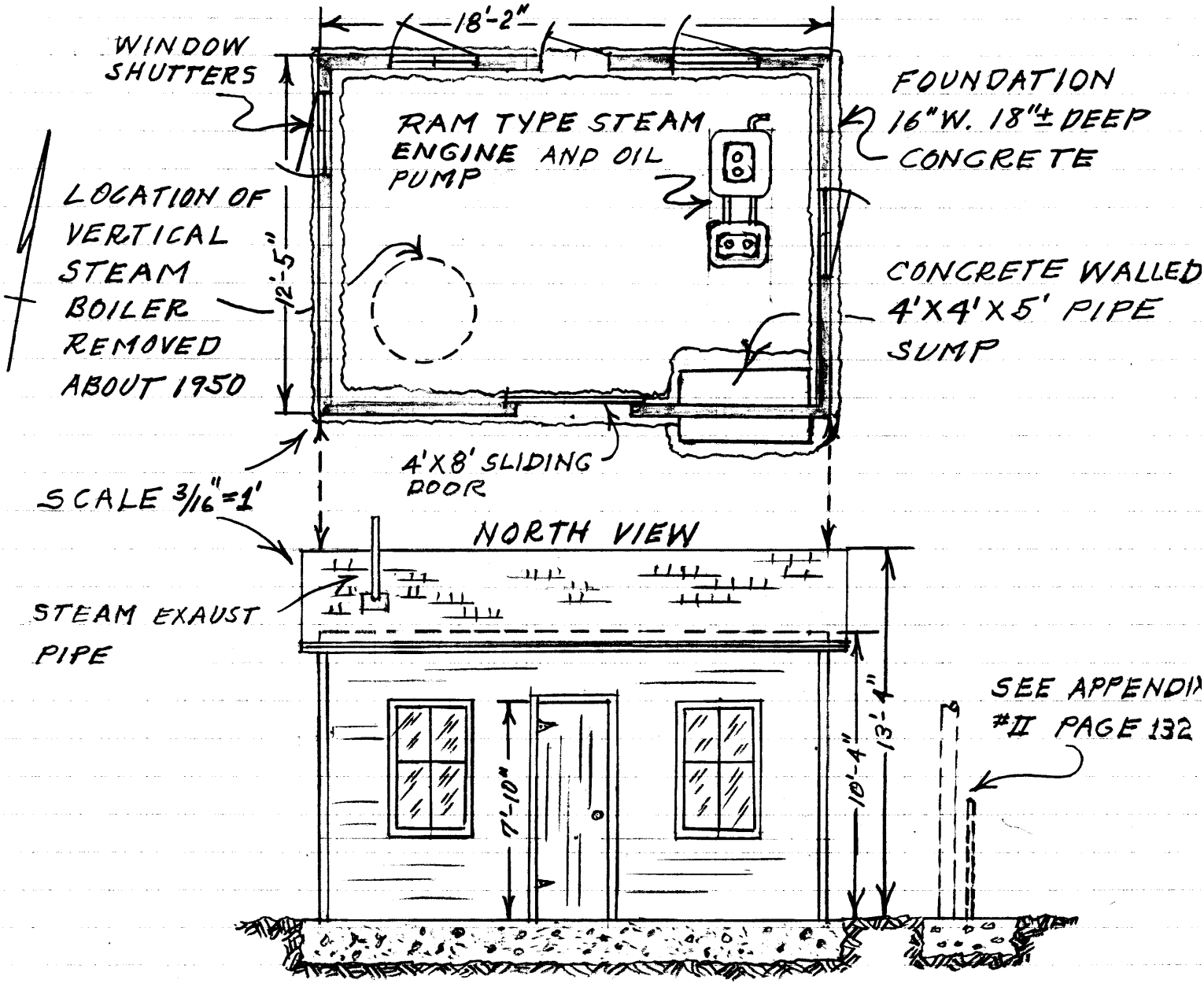
.3 C-5 UNIQUE FEATURES CONT.

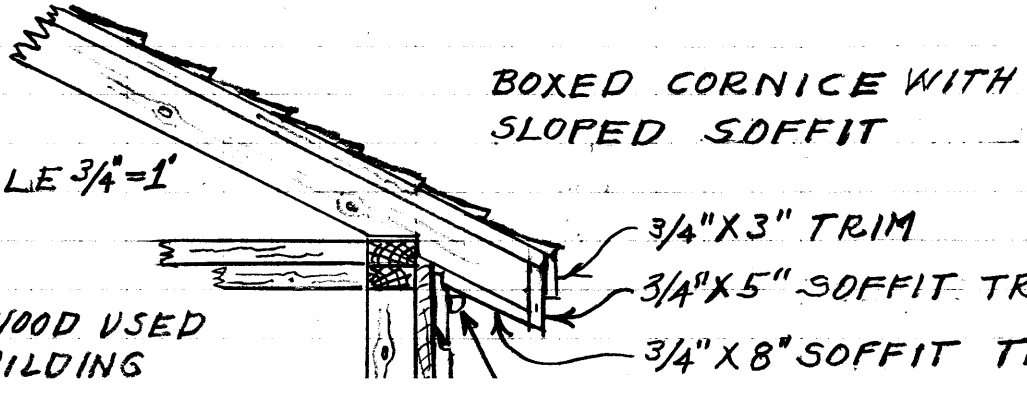
The last unique feature was made possible by the exterior double siding. This made it possible to place the corners, windows and door trim flush with the shiplap. This gave the building an exceptionally stream lined appearance and also increase preservation quality. The exterior siding is in very good condition after being built about 70 years ago.

THE 15,000 BARREL OIL TANK

Aside from the fact that the tank had a capacity of 630,000 gallons of oil and was about 60' in diameter and 30' high very little is known about it. Its removal in 1952 made further information hard to obtain. However, we were able by a search of old Southern Pacific records to obtain a copy of an authority for Expenditure #50878 dated 4/24/1952 which authorized the removal of this tank to be sold for scrap. It further authorized the removal of all other steel structures not in use to be removed at the same time.

OIL PUMP HOUSE DETAIL & MEASUREMENTS





NOTE-ALL WOOD USED IN THIS BUILDING

STRUCTURE "H"

ARMSTRONG TURN TABLE

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STRUCTURE "H" ARMSTRONG TURN TABLE

DESCRIPTION AND CONDITION OF STRUCTURE

See continuation Drawing at the end of this section.

The turn table was used primarily to turn the locomotives and tenders around although it could have been used for any type of railroad car. The name "Armstrong" is a colloquialism derived from the phrase "strong arms" were needed to push the turn table. This turn table is one of four originally installed on the Carson & Colorado Railroad system. One was at Mound House, Nevada, another at Candellara, Nevada, another at Laws, Ca., and one originally at Keeler, Calif. The Keeler turn table was moved to Owenyo, Calif., about 1935. The turn table at Laws is the only one left in operation.

It would appear that this "Armstrong Turn Table" is the most interesting item on the whole Museum Site. Here are some of the reasons;

- It is a matter of record that this structure and the one originally at Keeler were hauled by a specially built wagon with three or more teams of mules all the way from San Pedro, Calif., to Keeler and Laws, a distance of about 375 miles. The reason for this is that the four main 8"x16" beams to which the whole structures are anchored are 54' -6" long. The C&C R.R. flat cars are only 30' long. So these long beams of douglas fur could not be transported by railroad car around sharp turns from the north.
- When the mechanism is well lubricated and in good repair one person can push the turn table unloaded. Loaded with a locomotive two or more persons were needed.
- It is intended to make this turn table operative again. It will have to be locked except when a museum employee is present. This is for safety. A persons foot could be easily crushed if caught between the stationary and moving parts of the structure.

TURN TABLE CONDITION

Except for the beams being weatherbeaten and other minor repairs the whole structure is in good condition.

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TURN TABLE CONDITION CONT.

- The long horizontal beams have long deep cracks that need to be caulked and repainted to prevent further deterioration.
- Three rollers out of a total of 16 rollers that support the entire structure have been pushed off the oval rail. Also the original axles for these three were 1 1/2" in diameter which broke and had to be replaced. 1" diameter stock was used and will have to be replaced. This has caused one corner of the platform to sag about 3". Replacement of the three axles will be difficult because both ends will have to be turned down and threaded on a steel lath. It is the museum's intent to do this as soon as possible.
- All of the wood in the entire structure above the rollers were painted box car red and the metal parts black. A complete repaint and caulking job is badly needed.

.1 ALTERATIONS

The continuation drawing at the end of this section shows a standard for all of the Carson and Colorado and Southern Pacific hand operated turn tables. Apparently the 8"x12" x3'-4" sectionalized base plates immediately below the roller rail was not sufficiently supported by the eight 12"x12" foundation beams. Four additional laminating 12"x12" beams were placed for additional support. Even then shims were needed to make the roller rail completely level. This alteration was undoubtly done at the time of construction. Another alteration involved one of the four rim rollers. These rim rollers are 24'x0" from the center of the structure. Normally they hang about 6" above the rim rail but this one roller was shimmed down to come in contact with the rail. This was probable necessary to correct a sag or warp. When this alteration was made is not known.

.2 LOCATION

The turn table structure is on its original location.

.3 A A DESCRIPTION - Present and Original

Except for the alteration described above the turn table is the same as it was when built in 1883. Weathering

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.3 A A DESCRIPTION - Present and Original Cont.

Originally, when the structure was new, freshly painted in black and red, well-lubricated and in perfect balance it must have been a show piece and a source of pride to the railroad personnel. Fortunately, with a few hundred dollars for paint, caulking and axle replacement this historic Armstrong Turn Table can be a source of pride again and of great interest to the museum visitors.

.3 B CLASSIFICATION

See Continuation sheet Item #3

.3 C-1 CONSTRUCTION DETAIL

FOUNDATION DETAIL

The base or foundation of this turn table might be described as a "platform" with 12-3"x12"x16' J.P. planks laid side by side making a solid platform 6'x6'. This platform is about 3' below surrounding ground level. Then 8"x12" and 12" x12" J.P. beams were placed on top of the platform from the center and fanned out similar to the spokes of a wheel. This assembly is the foundation.

ROLLER AND AXLE DETAIL

Next a layer of 8'x12"x3'-4" J.P. beams were mortised together to form a rim circle roughly 13' in diameter and an inside diameter of about 11'-6" in diameter. A round railroad rail 12' in daimeter was spiked securely to the circular beams. In the center of the oval rail is a 2'x2'x14" block of wood made of 12"x12"x14" blocks and held together by 1/4" x3" strap iron and mortised into the doundation beams. See Continuation Drawing at the end of this section.

Then a steel casting 20" wide and 5" high supports a 3" steel axle. Next a hub 2' in diameter and with a rim of 1/4"x3" steel with 16-1 1/2" holes equally spaced make up the hub assembly. Next another steel casting 20"x6" thick and tapering down to 8" with a 3" hole rests on top of the hub and axle assembly. The top casting is bolted to the rotating platform. Each one of the 16 holes in the hub rim originally supported a roller 3 1/2"x12" that rides on an upper and lower

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ROLLER AND AXLE DETAIL CONT.

three of the axles broke and are now replaced with 1" axles. So now the assembly is equipped with 13-1 1/2" axles and 3-1" axles.

ROTATING PLATFORM DETAIL

The whole rotating plarform is bolted to four 8"x16" x54'-6" beams which is the entire length of the platform and are parallel to the railroad track. In place of railroad ties, twelve 8"x16"x15' beams are placed directly over the rollers and 18-8"x12" beams equally spaced to the rim of the platform and bolted to the main support beams. This makes up the beam part of the rotating platform. There are also two 12"x12"x15' beams that support the four rim rollers, also two 12"x16"x15" on the rim edge of the platform support that align the stationary and rotating railroad rails. The deck of the platform is covered with 2"x12" flooring so the cross beams are completely covered. For added strength there are two sets of 1" guy rods. One set on each side of the rotating platform is supported by 8"x12"x5'-6" beams. Two other sets of guy rods, one set to the rim of the platform and the other set about 11' from the rim are supported by two "A" frames made of 8"x10" beams that raise 22'-4" above the floor of the platform. All wood used in the entire structure is douglas fir.

.3 C-2 MEASUREMENTS

See Continuation Drawing at the end of this section.

.3 C-3 CHANGES

The only changes that were made was the placing of more 12"x12" beams under the roller rail for additional support, the replacement of three broken roller axles with 1" instead of 1 1/2" stock and the blocking of one rim wheel to correct a sag or warp.

.3 C-4 ARCHITECTURAL STYLE

This turn table is a standard railroad engineering design.

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.3 C-5 UNIQUE FEATURES

The turn table as a whole was well engineered. That is, the foundation, beams and guy rods were designed with ample capacity to carry any locomotive and tender used on the C&C R.R. When it is considered that the rotating part of the turn table weighs about 6 tons and the average locomotive with tender weighs another 44 tons and the fact that the whole structure with locomotive and tender turned easily is a tribute to the engineers who designed this structure. The engineers, however, underestimated the effect of this weight load on both the top and bottom oval track that supports the rollers. The tracks are completely flattened and flaked in places. Also, the rollers are chipped on the rim edge of each one. The oddity is, why after all the expense of providing rim rollers and a rim track, the rim rollers were not designed to take part of the load. The only explanation that railroad engineers have been able to give to date is that more than manpower would be needed to rotate the turn table. If one looks closely at continuation drawing at the end of this section it shows the rim rollers in contact with the rim rail.

.3 D HISTORICAL CHARACTER

The historical character of this turn table is the same as it was when built in 1883.

Finally, this application will describe several buildings and objects that are known to have existed within the proposed National Register Historic District boundaries, but which have been demolished or removed. The location of these sites is generally well-known from photographs and documentary sources. These sites are included in this application for two reasons. First, these sites represent potential for significant historical archeological values, with the potential to yield information important to the interpretation of this important historical site. Second, it is the intent of the Laws Railroad Museum to reconstruct some or all of these sites, as funds permit. These reconstructions will take place only after exhaustive research has been conducted, through photographs, documentary research, and through subsurface testing.

STRUCTURE X.1 TRAIN ORDER SIGNAL

A train order signal is a hand operated group of different 5"x3' paddles mounted on top of a 6"x8"x30' post. By pulling levers different paddles are moved from a vertical to a horizontal position. In this position the locomotive engineer can see the signal at least a quarter of a mile away. The signals indicate a host of operations such as loading or unloading freight, adding on or taking off cars and many others.

This signal is missing at the Laws Depot but an exact replica can be made from pictures and written material on hand. It is our intent to replace this signal. No additional research appears necessary.

STRUCTURE X.2 SECTION FOREMANS HOUSE

This house the same as the Agents House was built in 1883, and was removed sometime before 1920. The exact date is not known. Further, there are no pictures or written material to indicate its size, number of rooms or how it was constructed. Extensive research may provide some answers. It was located 120' south of the Agents House.

BUILDING X.3 GARAGE OR SHED

There is a shed 20'x20' at the location of what is referred to on one Southern Pacific Railroad drawing as a "Garage". However, the type of construction, material used, and low ceiling gives considerable evidence that this shed was in fact built in 1883, or shortly thereafter. A garage door exists on the west side. A small car could have been stored in this building. Another railroad map shows this building being used as a "chicken house". It probably was converted to garage use sometime after 1920.

BUILDING X.4 TOOL HOUSE

This building according to available information was 10'x12' and was built about 1890. What type of tools were stored in this building or what it looked like is unknown.

BUILDING X.5 ICE HOUSE

This ice house was 12'x22' and probable stored ice for summer use cut and hauled from one of the nearby ponds during the winter months. Ice houses were quite common before the turn of the century. They were usually made of 2" x12" studding with board and batten exteriors and 5"x3/4" T&G D.F. on the interior walls and ceiling. The roof rafters were also 2"x12". Then the 12" space in the walls and ceiling was filled with sawdust. A 12" thick door also filled with sawdust completed the structure. It can only be assumed at this time that the Laws Railroad ice house was made the same or similar.

BUILDING X.6 BATH HOUSE

One drawing shows four buildings in a close proximity to each other. Two are old box cars and two other small buildings. Which one of the four was the bath house is unknown. By deduction the building closest to the oil pump house would be most logical because of the steam boiler to provide hot water.

STRUCTURE X.7 15,000 BARREL OIL TANK

BUILDING X.8 PUMP HOUSE

This pump house was used to pump water from a canal nearby into the water tower apparently on an emergency basis, because water from this tower was normally used for domestic purposes. A cement floor 12'x12' with a raised pump platform is still in existance although badly deteriorated. The building that housed this pump was the same size as the foundation and constructed with a standard gable roof. This was determined from an old photograph.

BUILDING X.9 RAIL HANDCAR SHED

This building housed hand operated rail car or cars. One photograph shows this building with one of these cars in front. Nothing more is known about this structure except that it did exist.

BUILDING X.10 CATTLE SHED

Future plans call for purchasing or leasing a long narrow pie shaped piece of land to square off the museum boundary. When this occurs it will include an area on the south east corner of the property where a cattle shed or cow barn once stood. The barn was 16'x87'. This would indicate that possibly it was a dairy barn because almost all old time dairy barns were long and narrow. There is no visable evidence today of such a building regardless of its usage. Yet two different drawings show this building as being in existance about 1900.

BUILDING X.11 STEAM LINE HOIST

Please see Hoist drawing detail at the end of this section. Just how this steam line was used is not clear. Valves and pipes uncovered in the ground adjacent to the hoist clearly indicate that the 2" steel steam line was connected to the steam engine as well as other steam lines in the oil pump house.

STRUCTURE X.12 COAL HOIST

There is an old saying that necessity is the mother of invention. Originally all of the C&C R.R. locomotives burned wood. Then between 1895 and 1910, a gradual transition was made from wood burning to coal burning engines. Then another transition from coal to oil burning locomotives took place between 1905 and 1915. During these two transition periods which overlapped each other some method had to be found to load coal onto the locomotive tenders. This resulted in a home made air operated coal bucket hoist. See coal hoist drawing at the end of this section. These coal hoists were used at all refueling points along the line. There were four in all. One was in use at Laws.

Eight to ten coal buckets were filled by hand from coal bins beside the tracks. Each held about 400 pounds of coal. When refueling started the buckets were hoisted and dumped into the tender in a very short time. Thus, train schedules were never delayed because of slow refueling. Even though these coal hoists were home made they worked well for the few years they were needed. It is hoped that one can be located for the Laws Museum.

BUILDING NUMBERS X.13 AND X.14 ARE RESERVED FOR FUTURE USE.

STRUCTURE X.15 RAILROAD SIDINGS

Part of the tracks on the Museum Site were removed when the railroad service was discontinued in 1960. This included two sidings one on each side of the main line. They were removed from the switching point 700' south of the county road to the county road. All of the track has been removed north of the county road. All of the remaining track including the main line, the turn table track and the oil pump [illegible] from the switching point to

BUILDING X.16 SECTION HOUSE

The section house provided living quarters for permanently employed section gangs. The house was built in 1883 and measured 22'x32'. No details are avialable as to the floor plan or materials used but it seems reasonable to assume that since it was built at the same time as the other buildings that the construction would be the same as the agents and section foremans houses.

BUILDING X.17 BUNK HOUSE

The bunk house was used during the construction of the railroad in 1883. From information available the building was only used for a few years and then was removed. It would seem that the type of construction was of a temporary nature. Probably board and batten on exterior walls and heavy building paper on the interior walls. It measured 15' x25'.

BUILDING X.18 COW SHED AND YARD

This shed was small about 10'x15' and probably very poorly built. The yard measured about 50'x50'. Whether or not some railroad employee had his own milk cow since it was on railroad land is not known. Many families in the early days of Owens Valley did have their own milk cows, principally because it was the only way fresh milk could be obtained.

BUILDING X.19 SAND HOUSE

One of the most important items required by steam locomotives was an ample supply of dry clean sand of proper sized grit. Sand was used for two purposes. First sand was used to clean soot from the boiler tubes and second it was poured on the tracks just ahead of the locomotive drive wheels to prevent slipping - especially on icy tracks. Sand houses were well built to insure dry sand during the wettest weather. The sand house at Laws was 12'x12' with a cement floor.

BUILDING X.20 DWELLING

The print that shows this house or dwelling was 35' x40' which would have been larger than the agents house. Very little is known about this abode. Again it probably was built sometime before 1900 and was removed before 1920.

MISCELLANIOUS BUILDINGS

There is evidence of other small sheds and some structure having been in existance at some time on the museum property. Research may provide more information at a later date. Also, no attempt has been made to detail another 50 or 60 buildings that once exisisted in the Laws Townsite. Only those buildings or structures that once existed on museum property have been detailed.

HR-8-300A
11/78)
UNITED STATES DEPARTMENT OF THE INTERIOR
HERITAGE CONSERVATION AND RECREATION SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR HCRS USE ONLY
RECEIVED AUG 18 1981
DATE ENTERED OCT 1 1981

SIGNIFICANCE CONT.

The Bonanza visualized by William Sharon did not develop until 1900 when the very rich silver mines in Tonapah and the Bonanza gold mines in nearby Goldfield, Nevada were discovered.

A branch railroad was built to Candaleria, Nevada, where it joined the Tonapah and Goldfield Railroad and for the next 15 years Mr. Sharons dream of another bonanza was realized. Also, during this same period another bonanza was discovered called the Cerro Cordo Mine, near Keeler, California. It produced $213,392.000 in silver.

Between 1883 and 1900 a whole town was built around the railroad Bishop Station. About 1890 the "Bishop Stations" name was changed to "Laws Station" in honor of the Carson & Colorado Railroad Superintendant, Mr. R.J. Laws. This town adopted the same name. Until the automobile became dependable in the twenties, the railroad was the only dependable transportation in and out of Laws Station area. During that time thousands of passengers arrived and deported from the Laws Station. Also, millions of tons of mining and farm equipment, coal, merchandise and produce was shipped in and out.

Another very important event took place in 1900. The Carson & Colorado was sold to the Southern Pacific for $2,750.000. Over the next ten years wood and coal burning locomotives were converted to oil. The Laws Station was equipped for oil storage and refueling at that time.

As roads and automobiles improved during the 'twenties and 'thirties the railroad business slowly dwindled. Finally after years of deficit operation the last of the old Carson & Colorado Railroad between Laws and Keeler was discontinued in 1960. Other segments of the railroad had been shut down before World War II. Interested citizens in Bishop, California organized the Laws Railroad Museum to preserve the historic landmark. It is the only remaining station on the entire 307 miles route that had not been dismantled. The Laws Museum was opened to the public in 1966.

UNITED STATES DEPARTMENT OF THE INTERIOR
HERITAGE CONSERVATION AND RECREATION SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

REFERENCE MATERIAL

- Slim Rails Through the Sands P.1-42 By: George Turner
- Steamcars to the Comstock P.71-107 By: Lucius Beebe, Charles Clegg
- Narrow Gauge Nostalgia P.38-59 By: George Turner
- The City of Duluth Volume 1 Architecture By: The City of Duluty Dept. of Planning and Research
- Identifying American Architecture By: John J.G. Blumunson
- American Narrow Gauge P.182-204 By: John Krause & Donald Duke
- The Mighty Sierra P.169-200 By: Paul Webster
- Sierra Nevada P.59,66,67 and 70 - Photos by: Don Pike By: David Muench
- The High Sierra P.20-34 By: Time Life Publishers
- Earthquake Country P.180-181 By: Dr. Charles F. Richter
- Railroads of Nevada Volume 1 and 2 By: David F. Myrick
- Mixed Train Daily P.4,90,180,203-221 By: Lucius Beebe
- American Narrow Gauge P.90,180,203-221 By: John Krause
- The Story of Inyo P.287-294 By: W.A. Chalfant
- Nevada Ghost Towns and Mining Camps By: Stanley W. Paher
- The Slim Princess By: John Hungerford
- Narrow Gauge to Silverton By: John Hungerford
- Trains We Rode By: Lucius Beebe, Charles Clegg
- Virginia and Truckee By: Lucius Beebe, Charles Clegg
- Inyo County 1866-1966 By: Inyo County
- Mammoth Lakes Sierra By: Genny Schumacher
- Mines of the Eastern Sierra By: Mary DeDecker
- Owens Valley as I Knew It By: Richard Coke Wood
- The Ancient Bristlecone Pine Forest By: Russ & Ann Johnson

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

PERSONAL INTERVIEWS

Ben Kutsky - Works at Laws R.R. now at County Yards 2-8591

Marvin Bell - His brother Bruce Bell lived at Laws

Gus Cashbaugh - General information (Pioneer Family)

Richard Daytin - Home 2248 Flagg Reno, Nevada 89502 Telephone 702-826-5414
Business Nevada State Museum Capital Complex 89710
702-885-4810 Carson City, Nevada

Arthur Rose - 65 E. Emerson Way Sparks, Nevada 89431 702-359-7748
Oil Tank Information

Steven E. Drew - 2856 Rascommon Way Sacramento, California 95827
916-366-8351 - California State Railroad Museum
916-445-9193

Laurence Taylor - General Information (Pioneer Family)
Bishop, California 93514 714-873-3012

Frank Rouch - Railroad Information - Ex-Railroad Engineer
Laws Railroad Museum 714-873-5950

Robert W. King - Vice President Southern Pacific Railroad
One Market Street, San Francisco, California 415-362-1212

Stephen D. Miasnik - Supervisor of Museums, City of Los Angeles, California
200 N. Main Street, Los Angeles, Calif. 213-485-5571

Ray Ballash - Orange Empire Trolley Museum
P.O. Box 548 Perris, California 92370 714-657-2605

FHR-8-300A
(11/78)

UNITED STATES DEPARTMENT OF THE INTERIOR
HERITAGE CONSERVATION AND RECREATION SERVICE

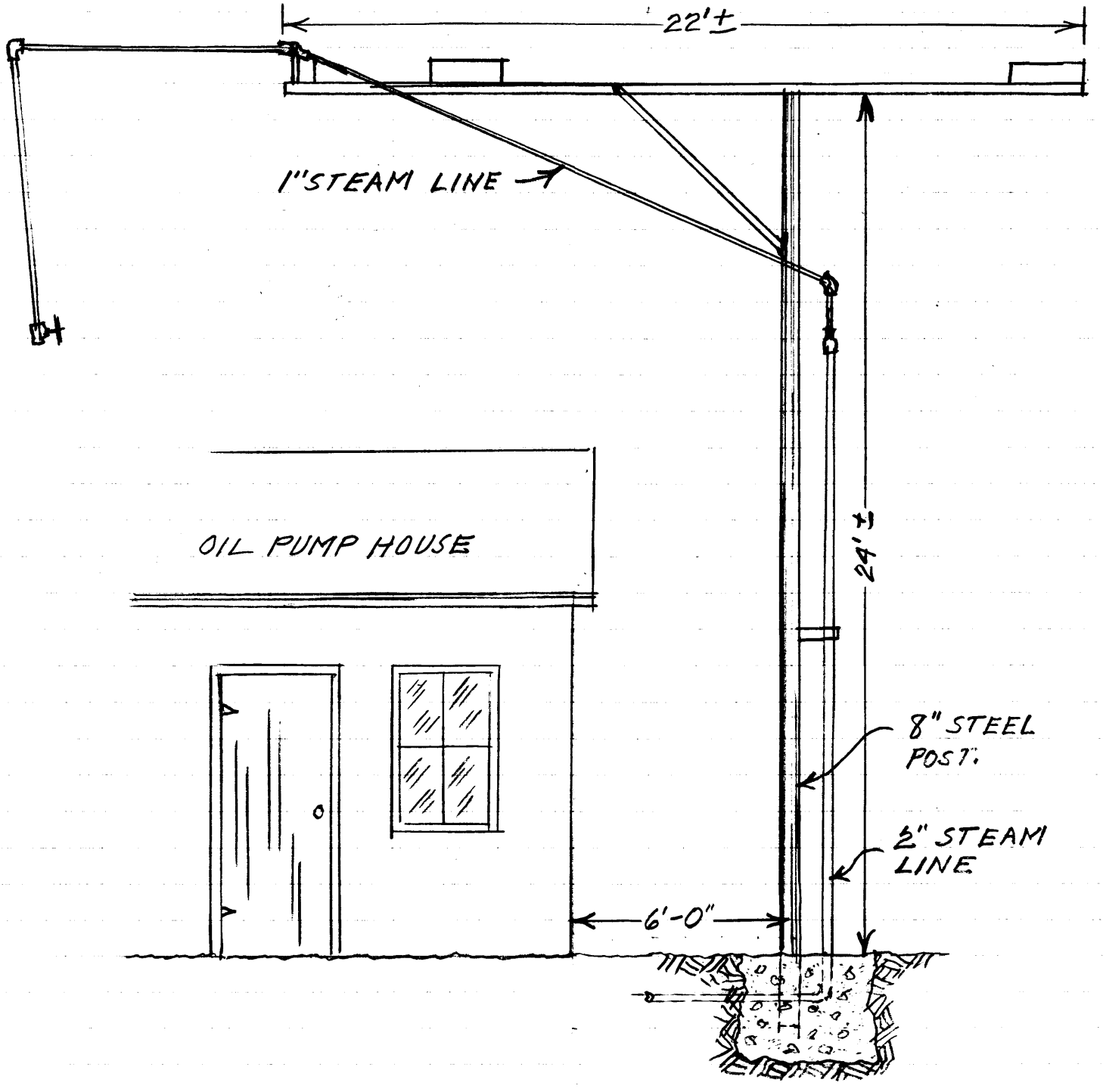
NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

GEOGRAPHICAL DATA

The Laws Railroad Museum is bounded on the north by a property line 100' north of the Silver Canyon Inyo County Road and adjacent to the Southern Pacific Railroad property. This portion of the property is 100'x 400' and encompasses .92 acres. The county road - R/W is 50' wide. The main part of the property south of the county road is approximatley 400'x 1068' and encompasses 10.2 acres. The east, west and south sides of the property line are bounded by property owned by the City of Los Angeles, Department of Water and Power.

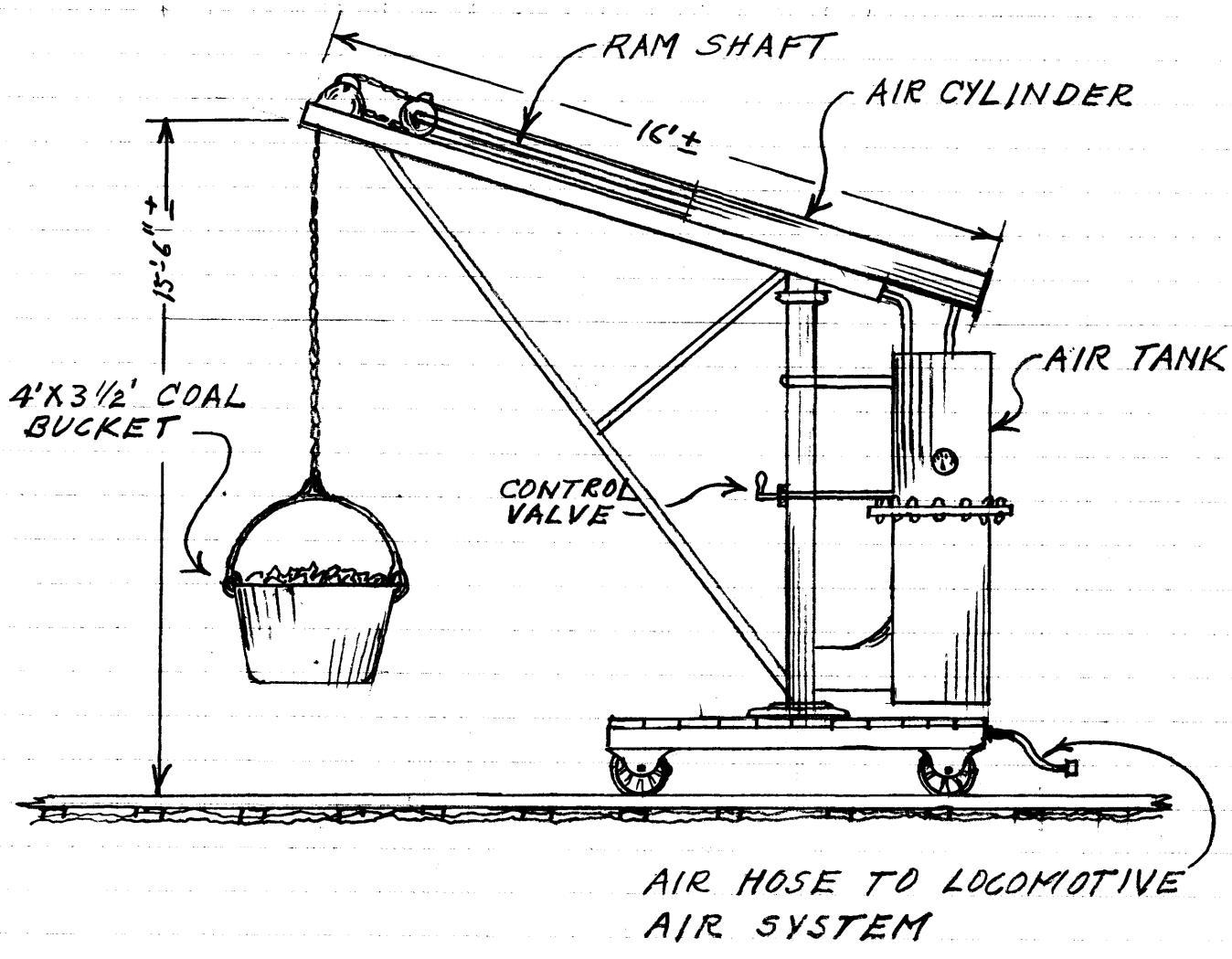
The UTM boundaries within the Museum site encompasses 4.05 acres and is shown on continuation drawing, Item #7, page 23. The reason for this smaller acreage is to enclose just the area that includes buildings, structures or railroad equipment proposed for National Registry.

STEAM LINE HOIST

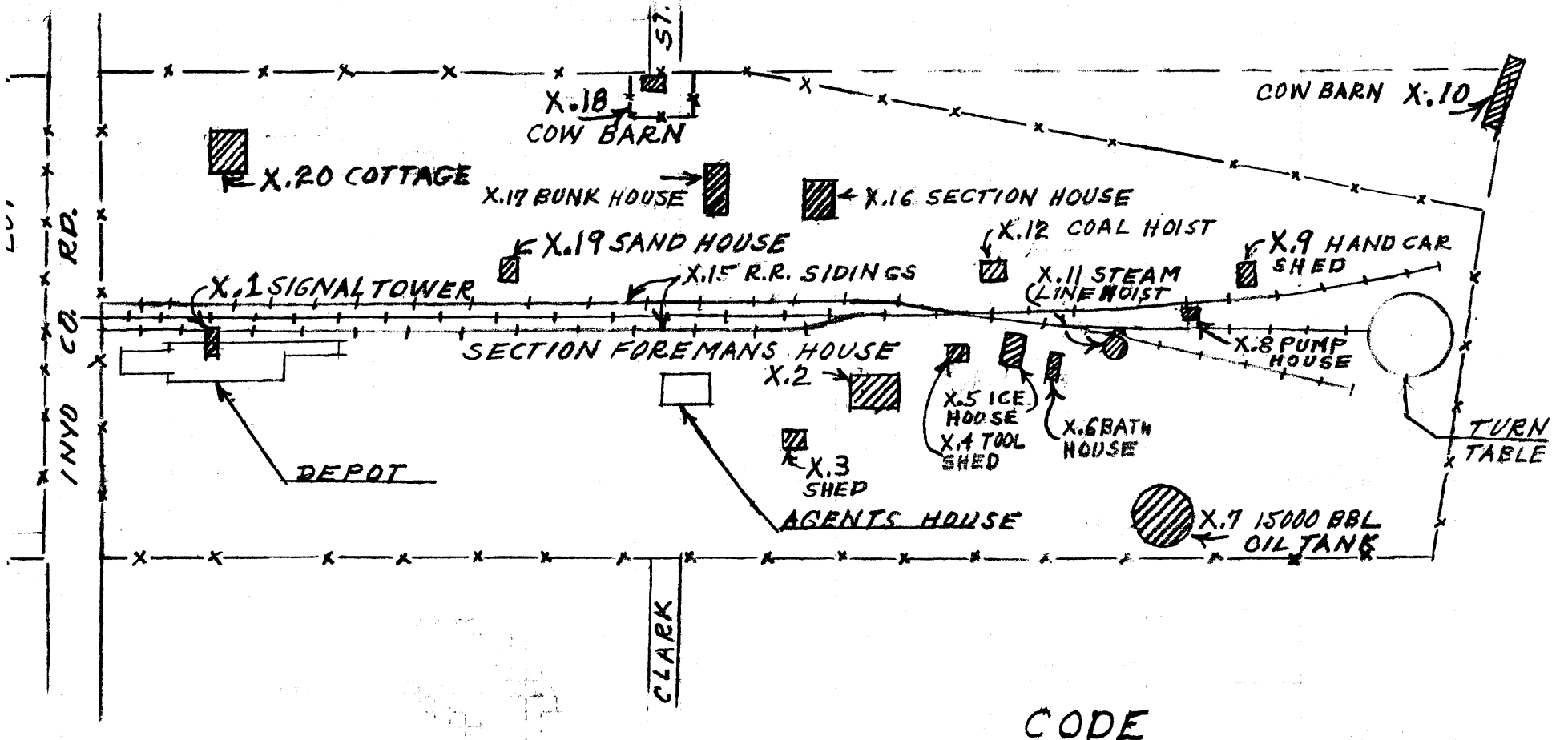


COAL HOIST DETAIL

APPROX. SCALE 1/4"=1'



BUILDING & STRUCTURES TO BE RESEARCHED



APPROX. SCALE 3/4"=100'

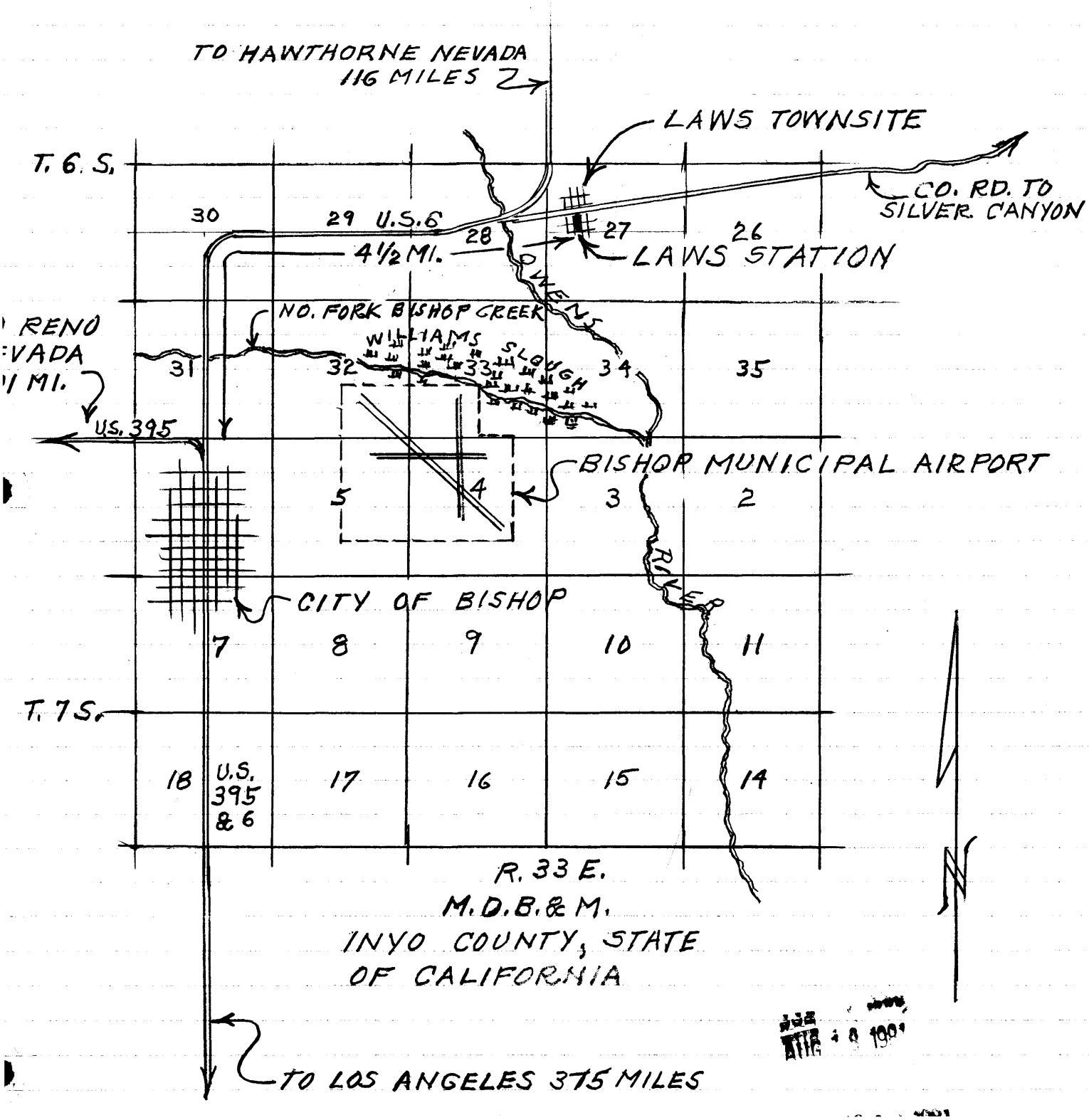
CODE

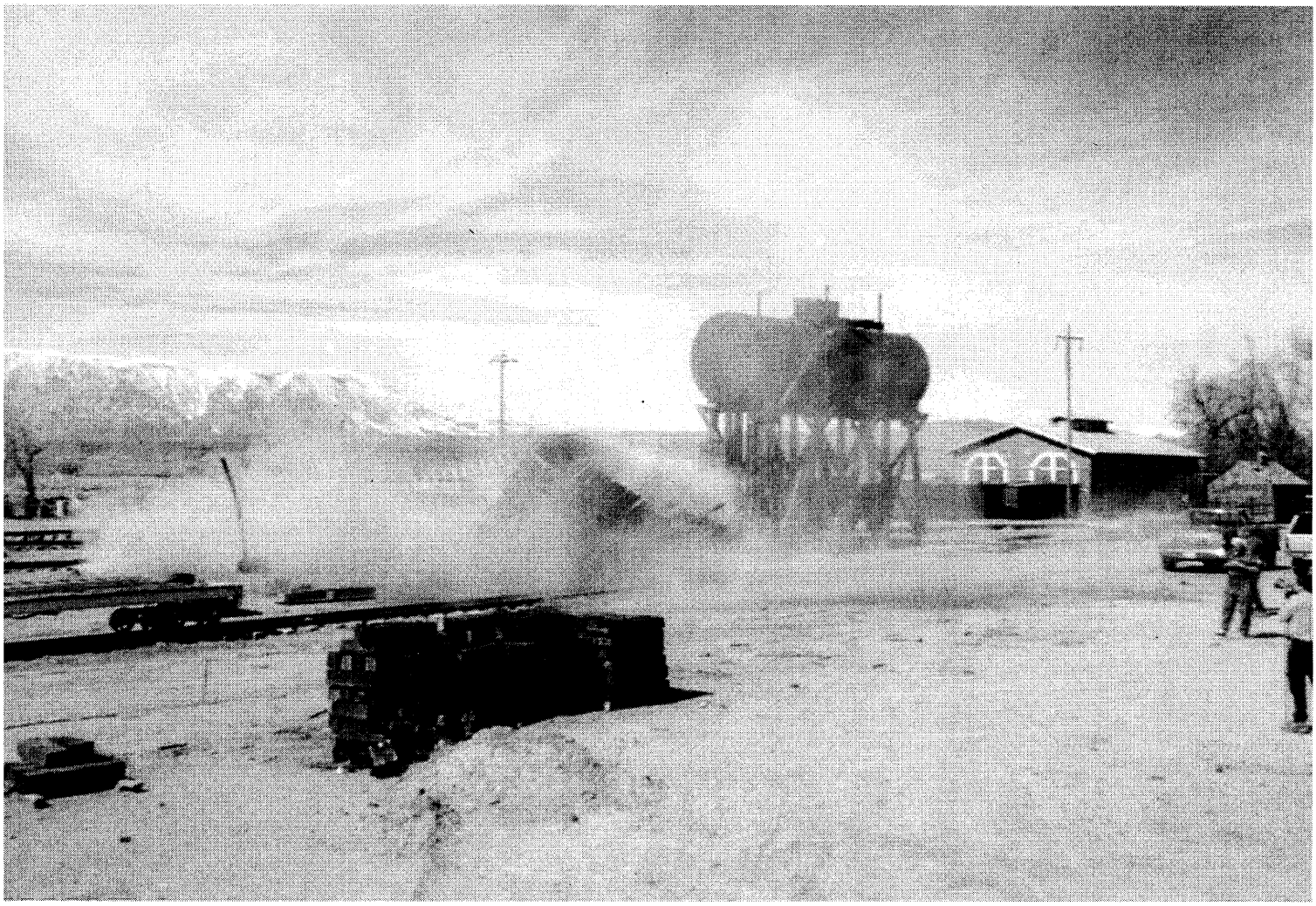
X.1 – APPENDIX II BLDG OR STRUCTURE DESIGNATION NUMBER

APPENDIX #II

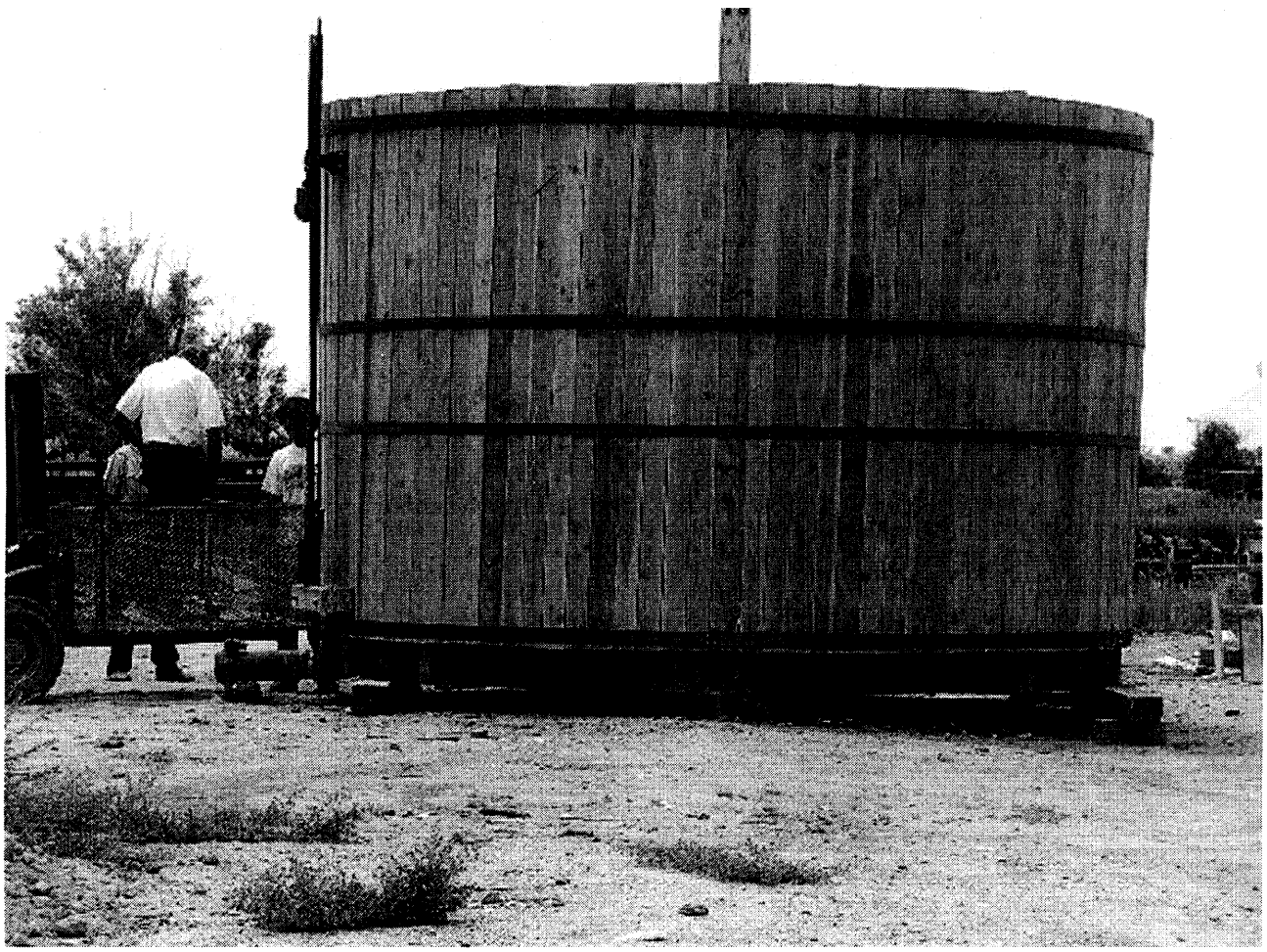
LAWS STATION 1890-1960
(LAWS R.R. MUSEUM) 1961-1981

VICINITY MAP IN OWENS VALLEY

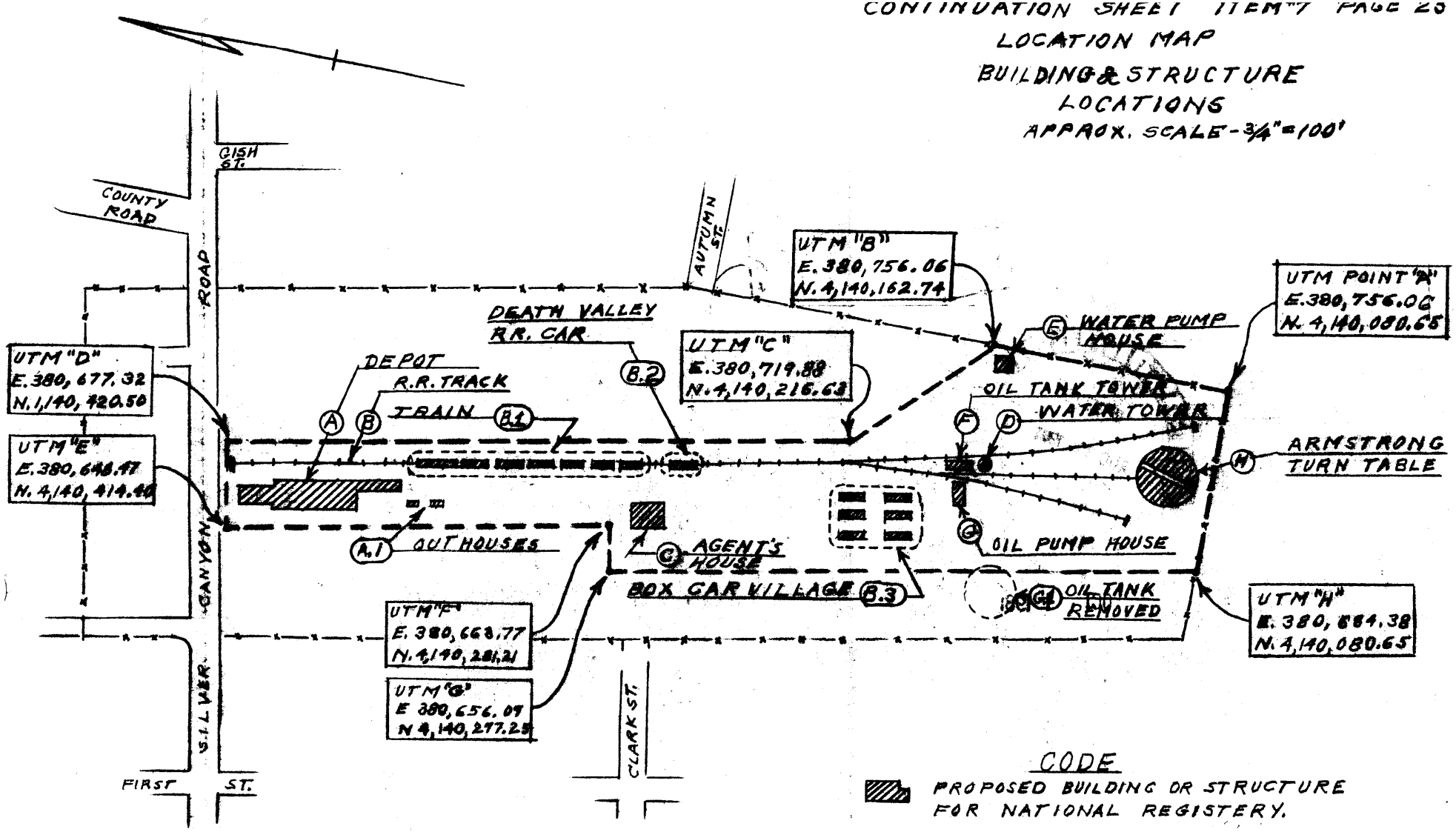





CAUTION



LOCATION MAP
BUILDING & STRUCTURE LOCATIONS
APPROX. SCALE - 3/4" = 100'



CODE

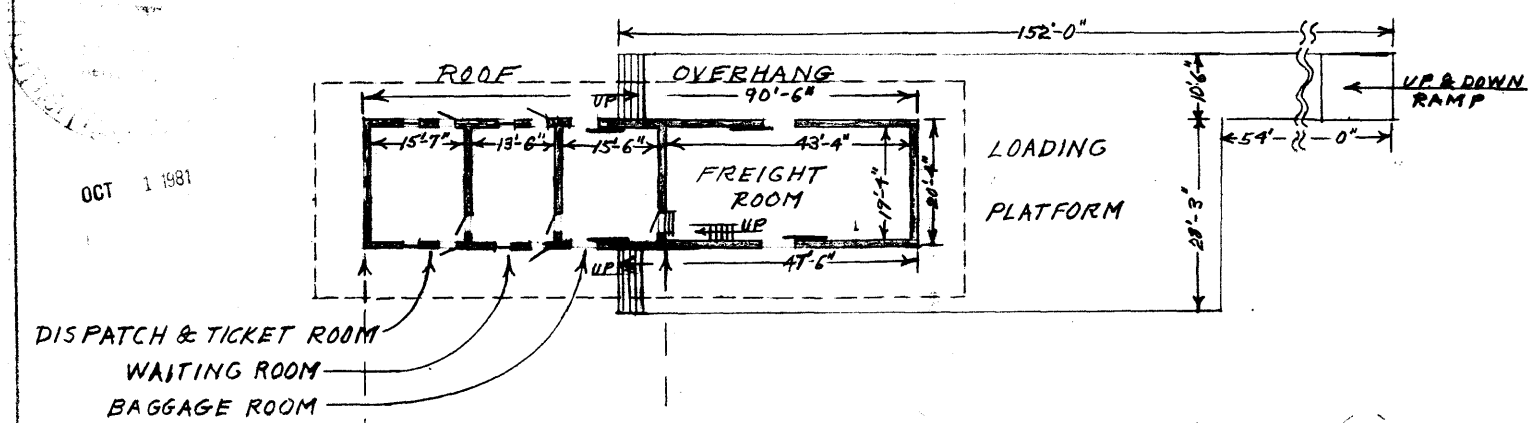
PROPOSED BUILDING OR STRUCTURE FOR NATIONAL REGISTERY.

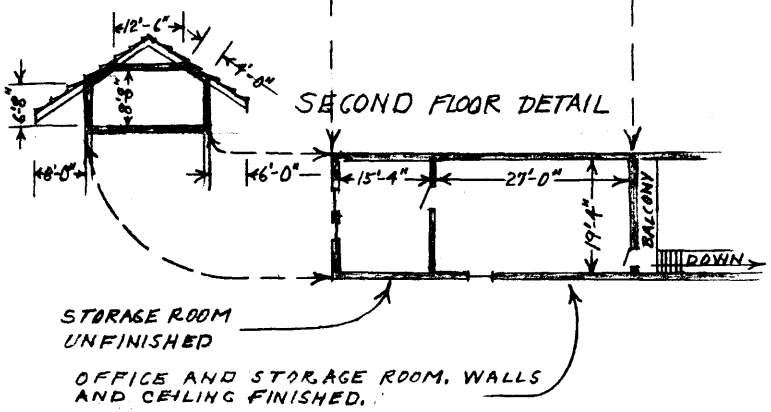
PROPOSED NATIONAL REGISTERY BOUNDARY.

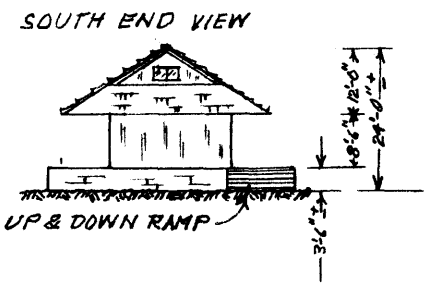
LAWS RAILROAD MUSEUM PROPERTY LINE.

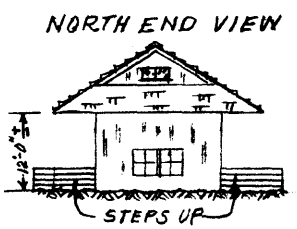
BUILDING "A" DEPOT
MEASUREMENT DETAIL
SCALE 1"=20'

FIRST FLOOR DETAIL



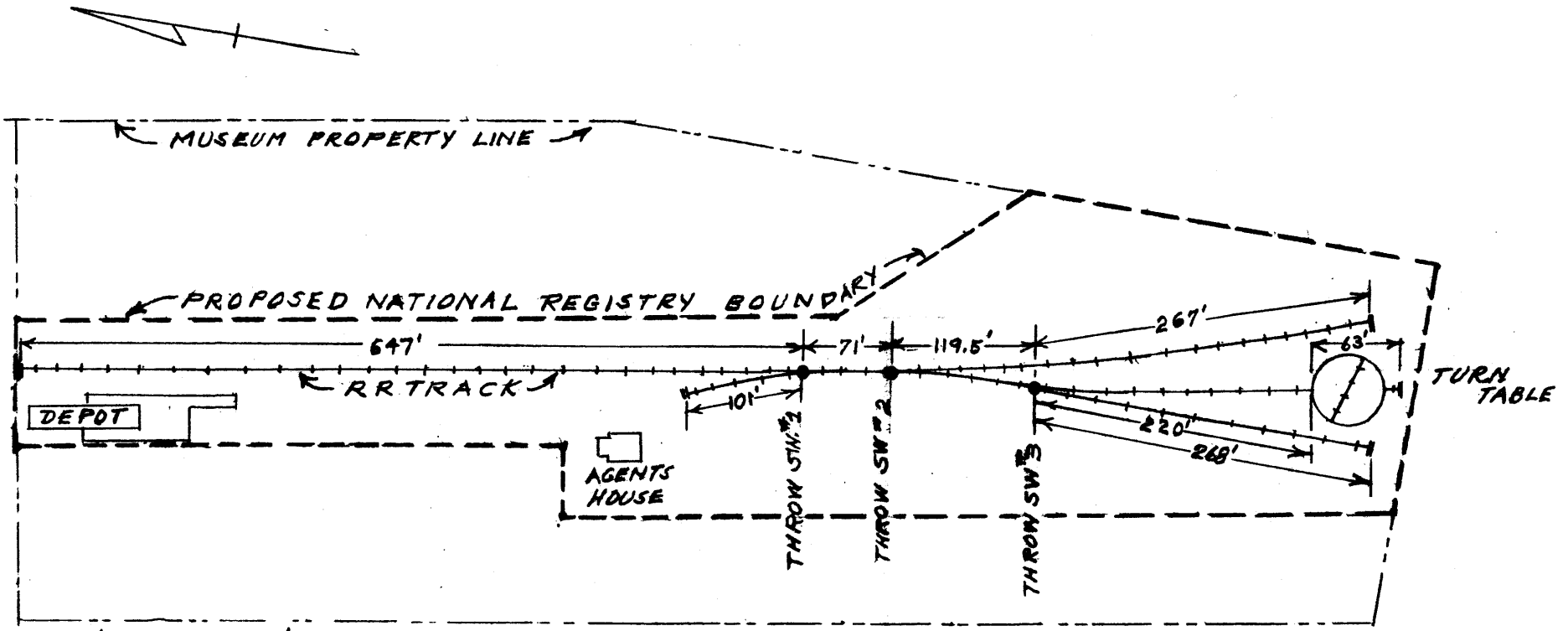






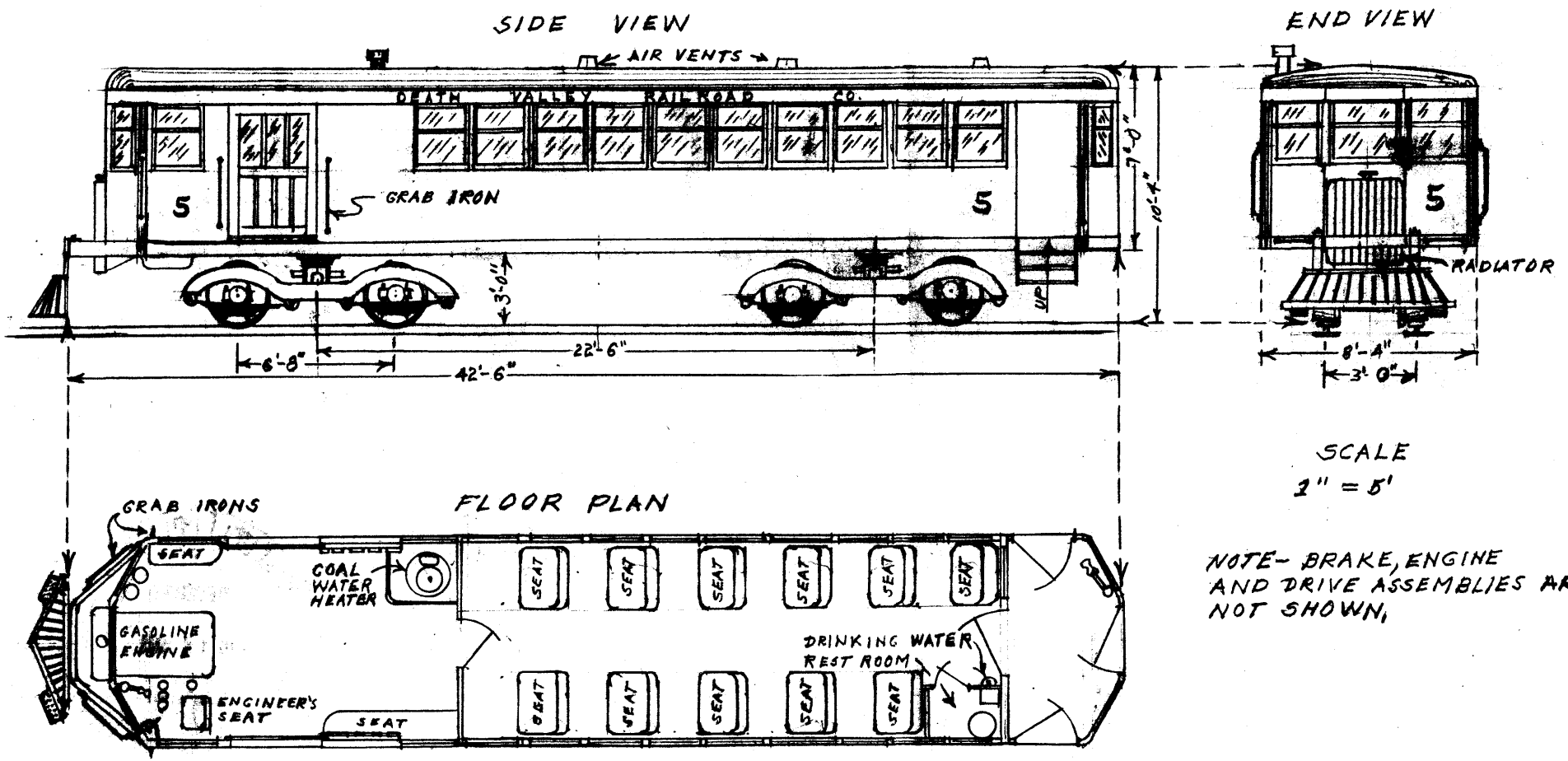
3/15/80 R.A.D

CONT. DRWG. ITEM #7
RAILROAD TRACK DETAIL



35 lb. RAIL - 153' TOT.
60 lb. RAIL - 1004.5' TOT.

DEATH VALLEY RR. PASSENGER CAR DETAIL

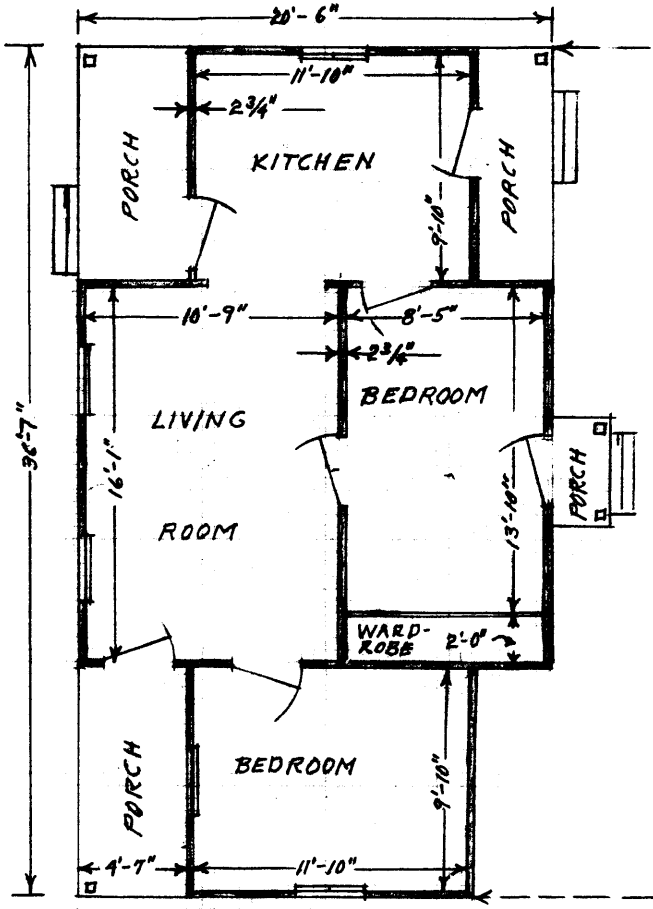


NOTE- BRAKE, ENGINE AND DRIVE ASSEMBLIES ARE NOT SHOWN.

MEASUREMENTS CONTINUATION SHEET ITEM #7

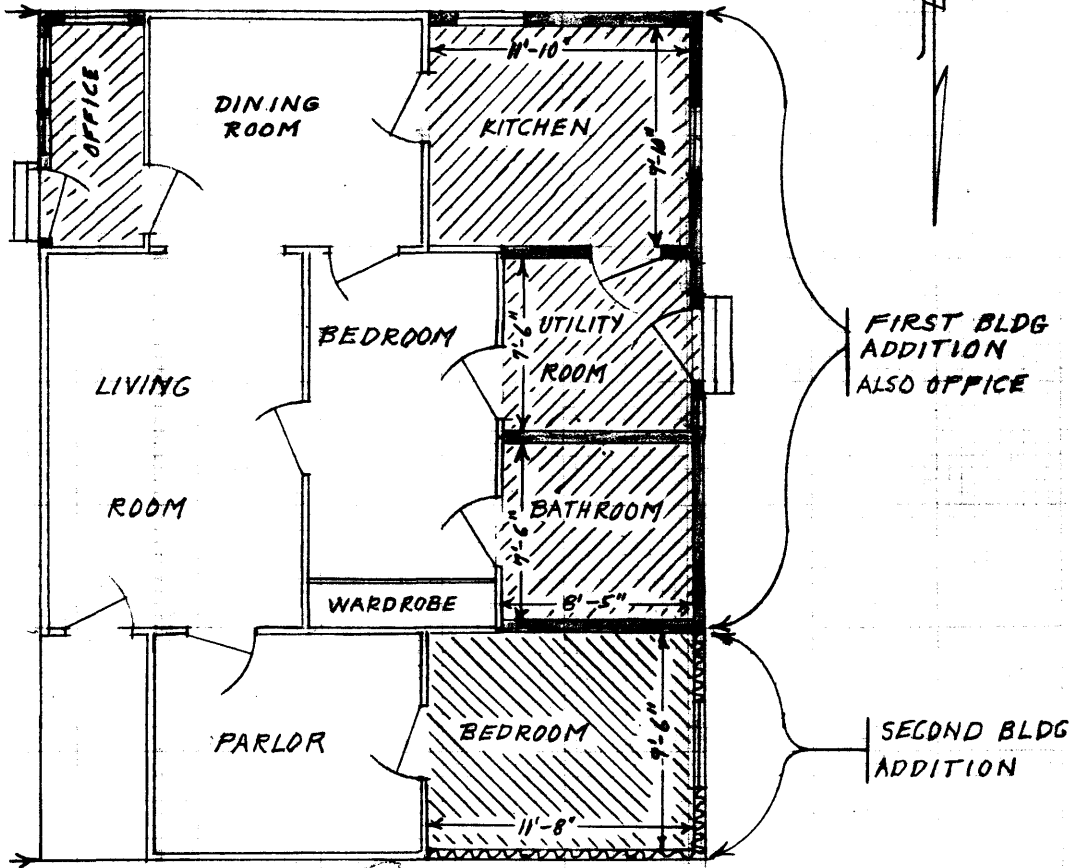
SCALE 3/16"=1'

ORIGIONAL AGENT'S HOUSE
AS BUILT IN 1883

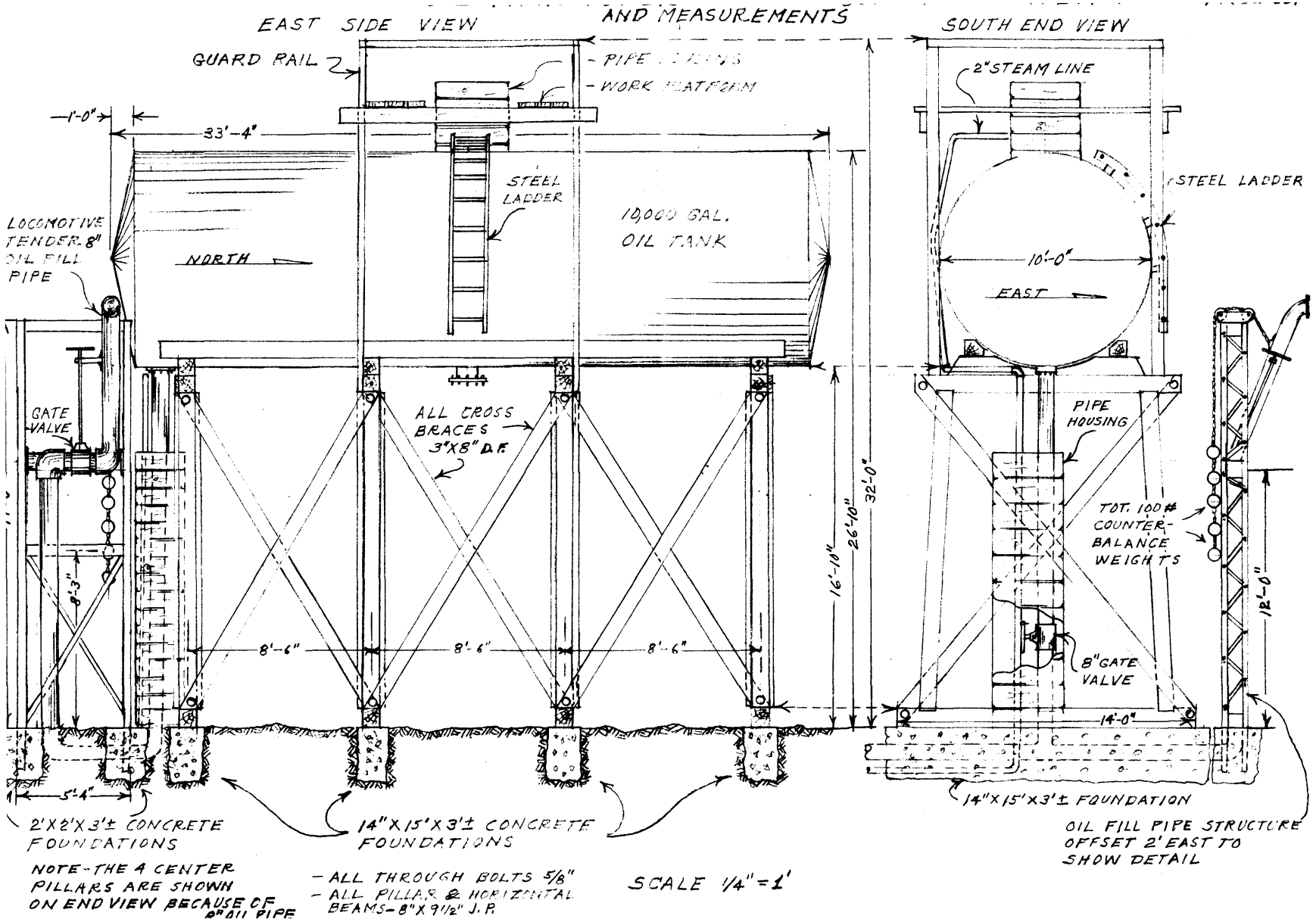


CEILING HEIGHT-ALL ROOMS
8'-8"

AGENT'S HOUSE SHOWNING FIRST
AND SECOND BUILDING ADDITIONS
PRIOR TO 1920



CEILING HEIGHT 1ST. & 2ND.


EAST SIDE VIEW AND MEASUREMENTS
SOUTH END VIEW
GUARD RAIL
- PIPE RAILS
- WORK PLATFORM
2" STEAM LINE
1'-0"
33'-4"
STEEL LADDER
10,000 GAL. OIL TANK
LOCOMOTIVE TENDER 8" OIL FILL PIPE
NORTH
EAST
10'-0"
GATE VALVE
ALL CROSS BRACES 3"X8" D.F.
PIPE HOUSING
TOT. 100# COUNTER-BALANCE WEIGHTS
8'-3"
8'-6"
8'-6"
8'-6"
16'-10"
26'-10"
32'-0"
12'-0"
8" GATE VALVE
14'-0"
5'-4"
2'X2'X3'± CONCRETE FOUNDATIONS
14"X15'X3'± CONCRETE FOUNDATIONS
14"X15'X3'± FOUNDATION
OIL FILL PIPE STRUCTURE OFFSET 2' EAST TO SHOW DETAIL
NOTE-THE 4 CENTER PILLARS ARE SHOWN ON END VIEW BECAUSE OF 8" OIL PIPE
- ALL THROUGH BOLTS 5/8"
- ALL PILLAR & HORIZONTAL BEAMS-8"X9 1/2" J.P.
SCALE 1/4"=1'