

Superconducting Super Collider Laboratory

2550 Beckleymeade Avenue, Suite 260

Dallas, TX 75237-3946

PROJECT MANAGEMENT**Systems Integration****MEMORANDUM****To: Distribution****From: Mike Syphers** *Mike***Date: April 4, 1990****Subject: Collider tunnel and building designations**

As a result of our meeting April 3, 1990, the following naming scheme for Collider tunnel locations, Collider service areas, and associated WBS categories has been adopted:

- 1) The rings will be divided into four regions, designated N, S, E, and W according to geographic location.
- 2) The north and south arcs are divided into sectors designated N1, N2, ..., N5 and S1, S2, ..., S5. The west cluster is divided into a utility region WU and four experimental areas WN, WS, WIN, WIS. The east cluster is divided into a utility region EU and four experimental areas EN, ES, EIN, EIS.
- 3) Each sector of each standard arc contains 96 standard quadrupole locations. These locations will be designated 01-96 with the location number attached to the sector name (N201-N296 for the N2 sector, or S401-S496 for the S4 sector, as examples). The cryogenic isolation valves within a sector will be located at positions 12, 24, 36, ..., 96 around the arc.
- 4) The numbering of the utility straight sections will be such that the center of the utility has the label "130" with the prefix of the adjacent arc (N130 for the west cluster utility, or S130 for the east cluster utility). Since this region is fed from the same refrigerator as the adjacent arc, and since there are approximately 40 quadrupoles in this region, this numbering seems natural. Details of the quadrupole numbering in this region will be produced in the near future.
- 5) The tunnel designations for the outer bypass interaction regions will have two digits, with "50" being the interaction point. (WN50, ES50, as examples.) Details of the quadrupole numbering in this region will be produced in the near future.
- 6) The same will apply to the inner bypass interaction regions. (WIN50, EIS50, as examples.)

7) A typical sector has two service areas associated with it:

The large shaft associated with the refrigeration plant (previously called an E shaft) will have access to the tunnel at, or as close to as possible, the "48" location. The name for the service area associated with this shaft will have the number "5" attached to the sector name. For example, the major service area and shaft for the N3 sector labeled N35 will lead to the tunnel location N348 and the major service area and shaft for the S1 sector labeled S15 will lead to the tunnel location S148.

The smaller shafts located between the large shafts (previously called the "F" shafts) will have access to the tunnel at, or as close to as possible, the "96" location. The name for the service area associated with this shaft will have the number "0" attached to the sector name. For example, the service area and shaft labeled N30 will lead to the tunnel location N296 and the service area and shaft labeled S20 will lead to the tunnel location S196. (These lead to the "96" locations rather than the "1" locations because the turn around boxes are located at the "96" locations.)

8) Additional shafts and service areas, such as the RF shafts, should have designations in accord with their locations relative to the tunnel. That is, if a shaft is to join the tunnel at location N110, the shaft could be designated N11, etc.

9) For the Work Breakdown Structure (WBS), the components found in Section 6.1 will be those of the West Utility region, (up to tunnel location N148) and will include associated shafts (RF, etc.) in this region. Section 6.2 will include components in the tunnel from location N148 to location N201 and will include the N15 service area and shaft, etc. Likewise, Section 6.3 will include components in the tunnel from N201 to N248 and will include the N20 service area and shaft, and so on. The sections can be titled something like

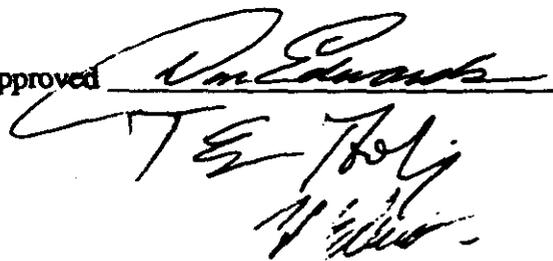
6.3 N20 to N25

and so on. The East IR's (outer) will be grouped in WBS 6.10 and the West IR's (outer) in WBS 6.20. The inner IR's will be 6.21 and 6.22 for the East and West respectively.

The division between elements of adjacent WBS sections will occur at the cryogenics isolation valve. (The valve itself belongs to the WBS section "to the right" as seen in the tunnel looking radially outward.)

The above rules may at first sound complicated but the idea was to have a scheme that will be easy to remember and that will be functional operationally. Only four letters (to first order) need to be remembered and major entrances to the tunnel are at the midpoints of a sector. Additionally, there is an easy to remember correspondence between service building names and tunnel location designations. The following pages contain drawings which attempt to clarify the naming scheme.

Approved

The image shows three handwritten signatures or initials. The top one is a cursive signature that appears to be 'D. Edwards'. Below it are two sets of initials, 'TE' and 'W', written in a stylized, bold font.

Revised 4/11/90

Revised 5/1/90

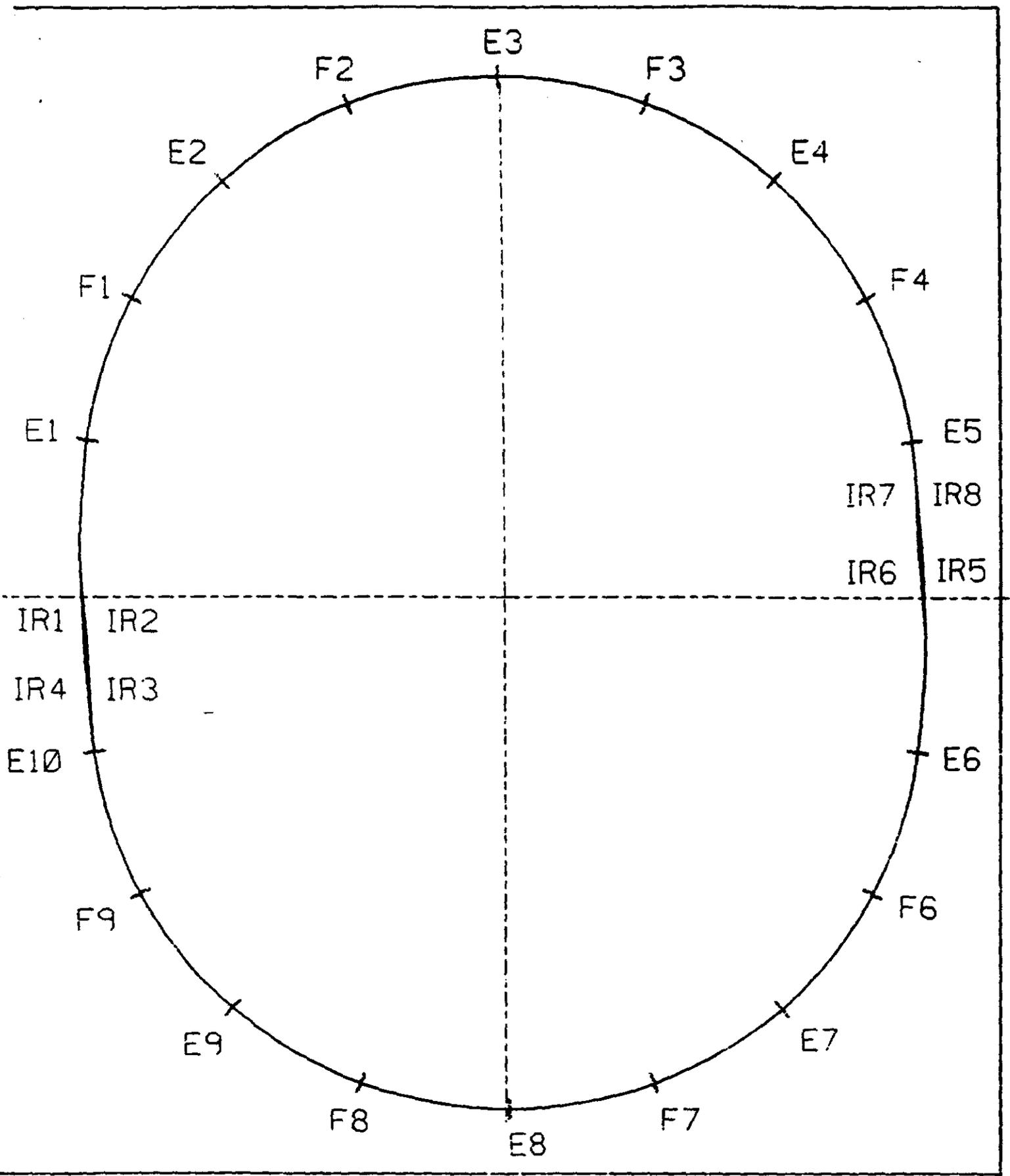
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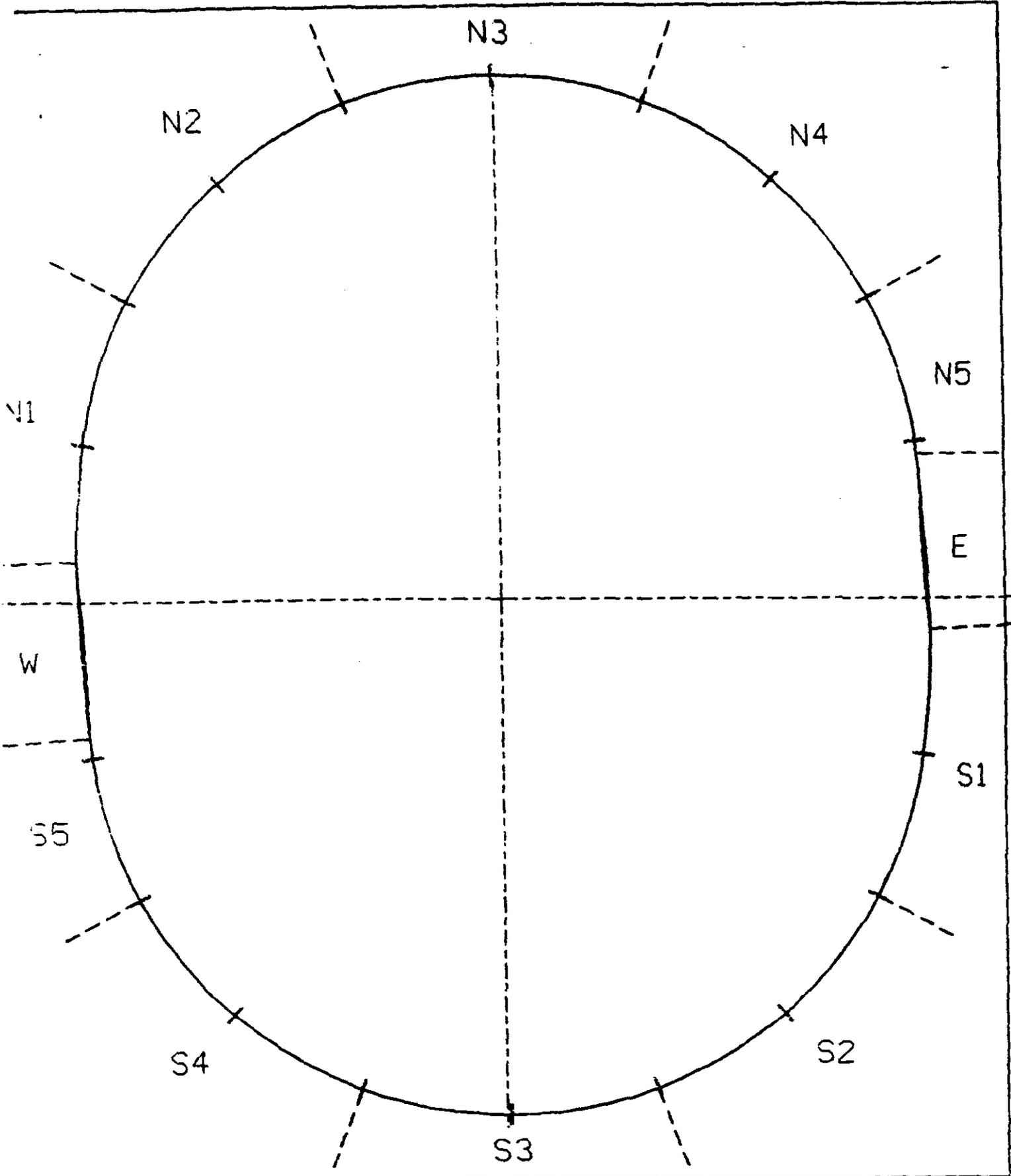
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Collider Group
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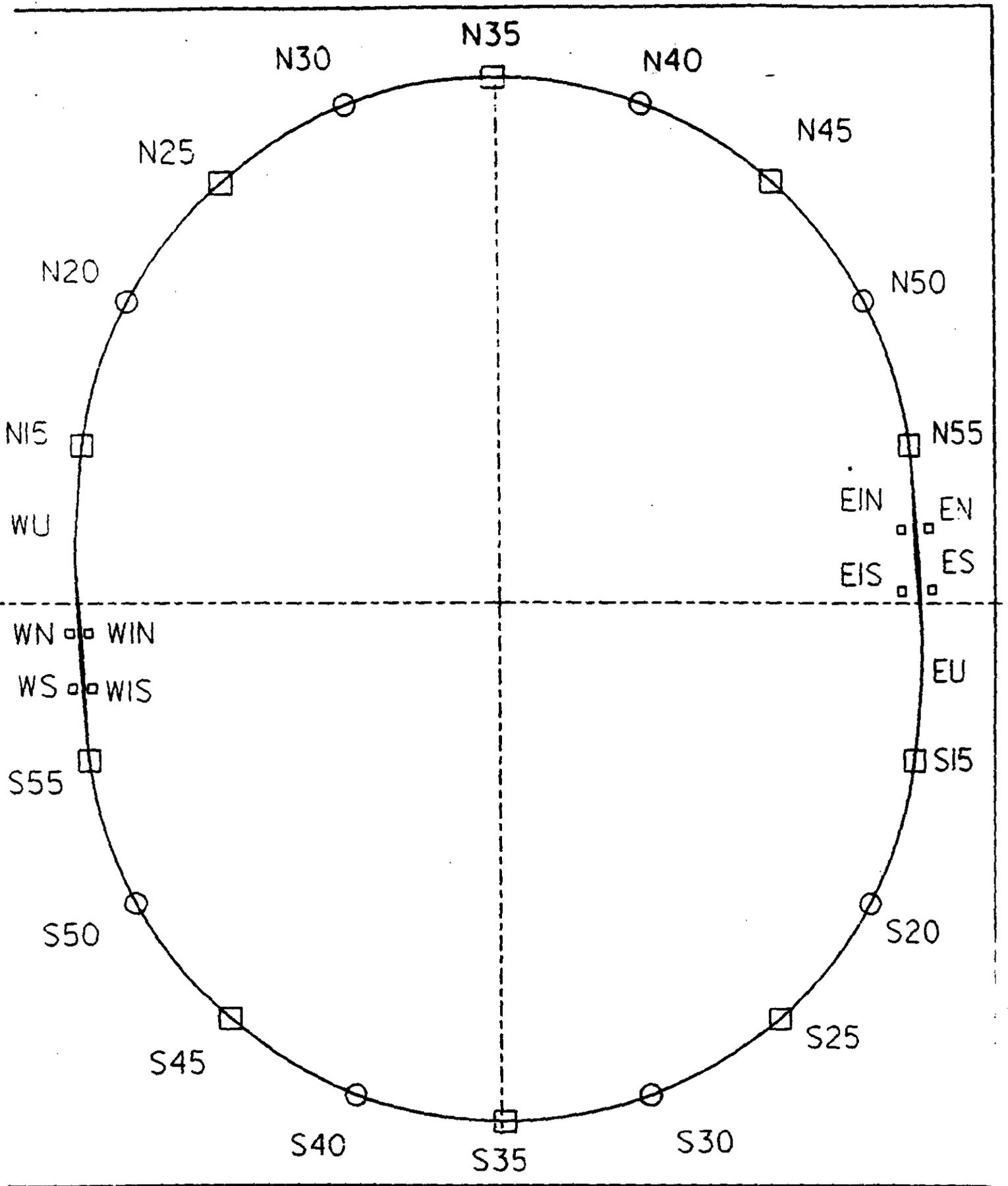
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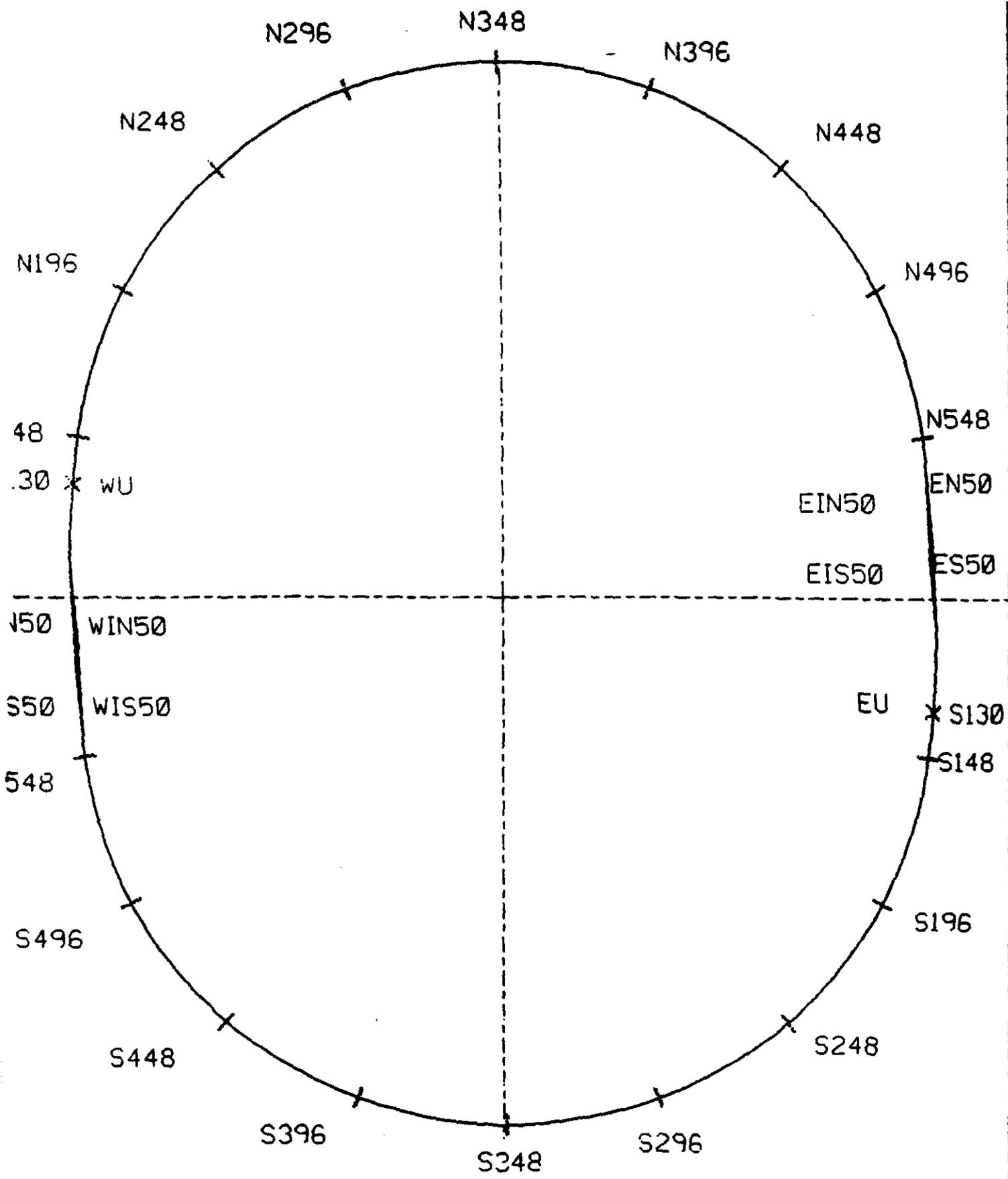
SCDR NAMING SCHEME
SERVICE AREAS



PROPOSED
SECTOR DESIGNATIONS

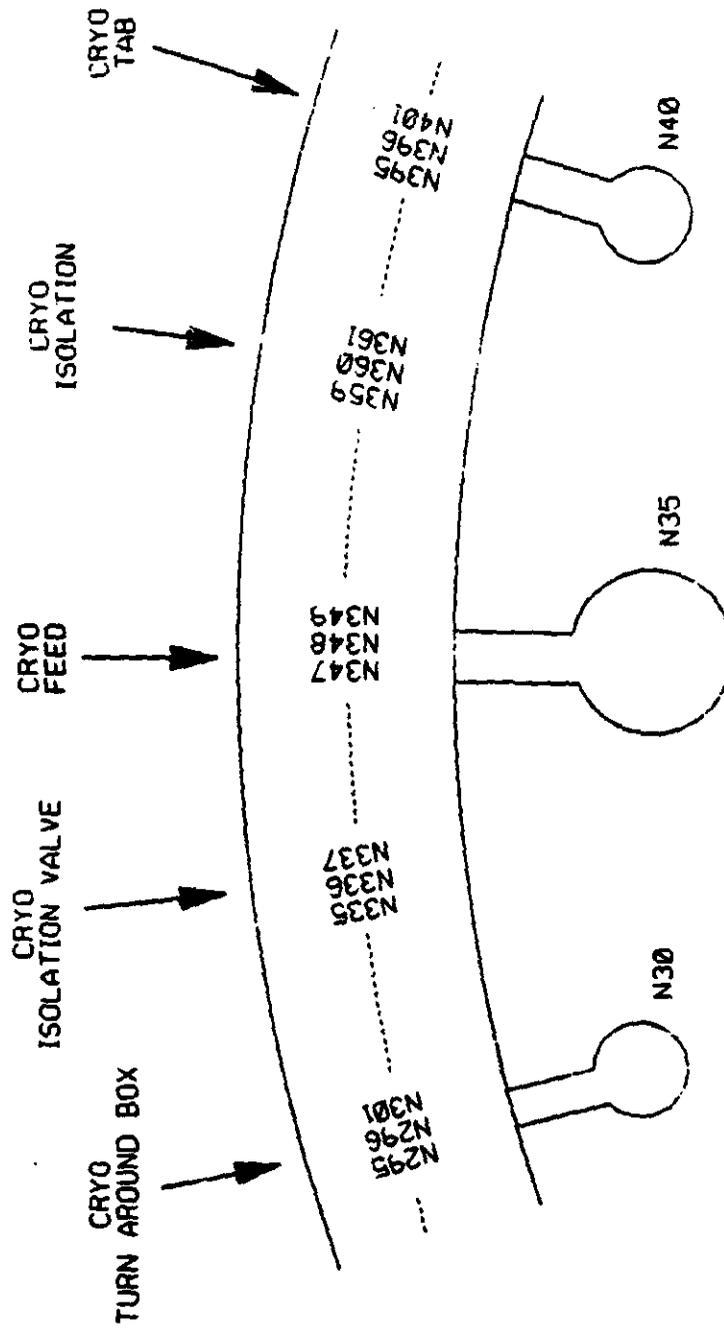


PROPOSED
SERVICE AREA DESIGNATIONS

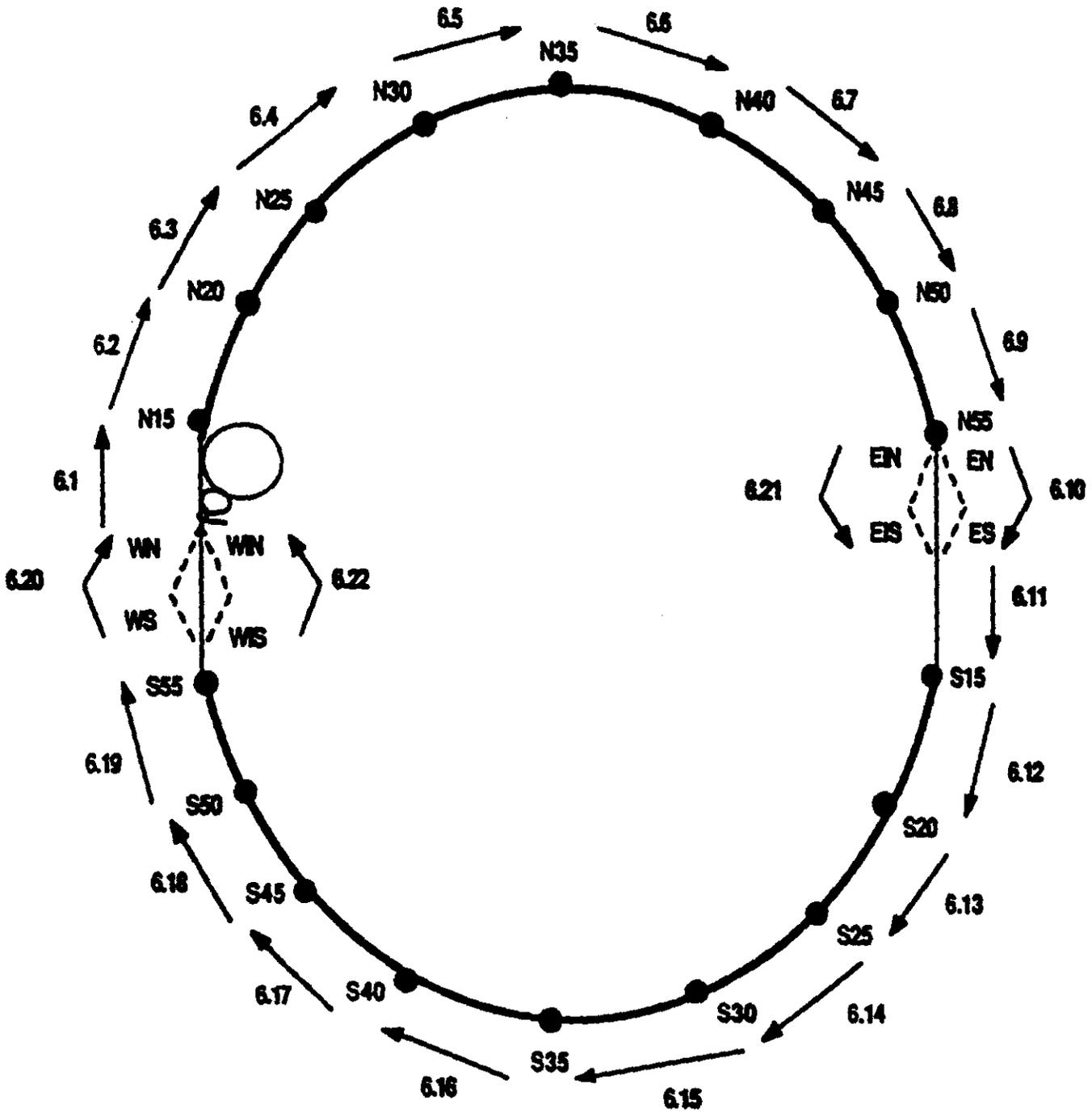


PROPOSED
TUNNEL DESIGNATIONS

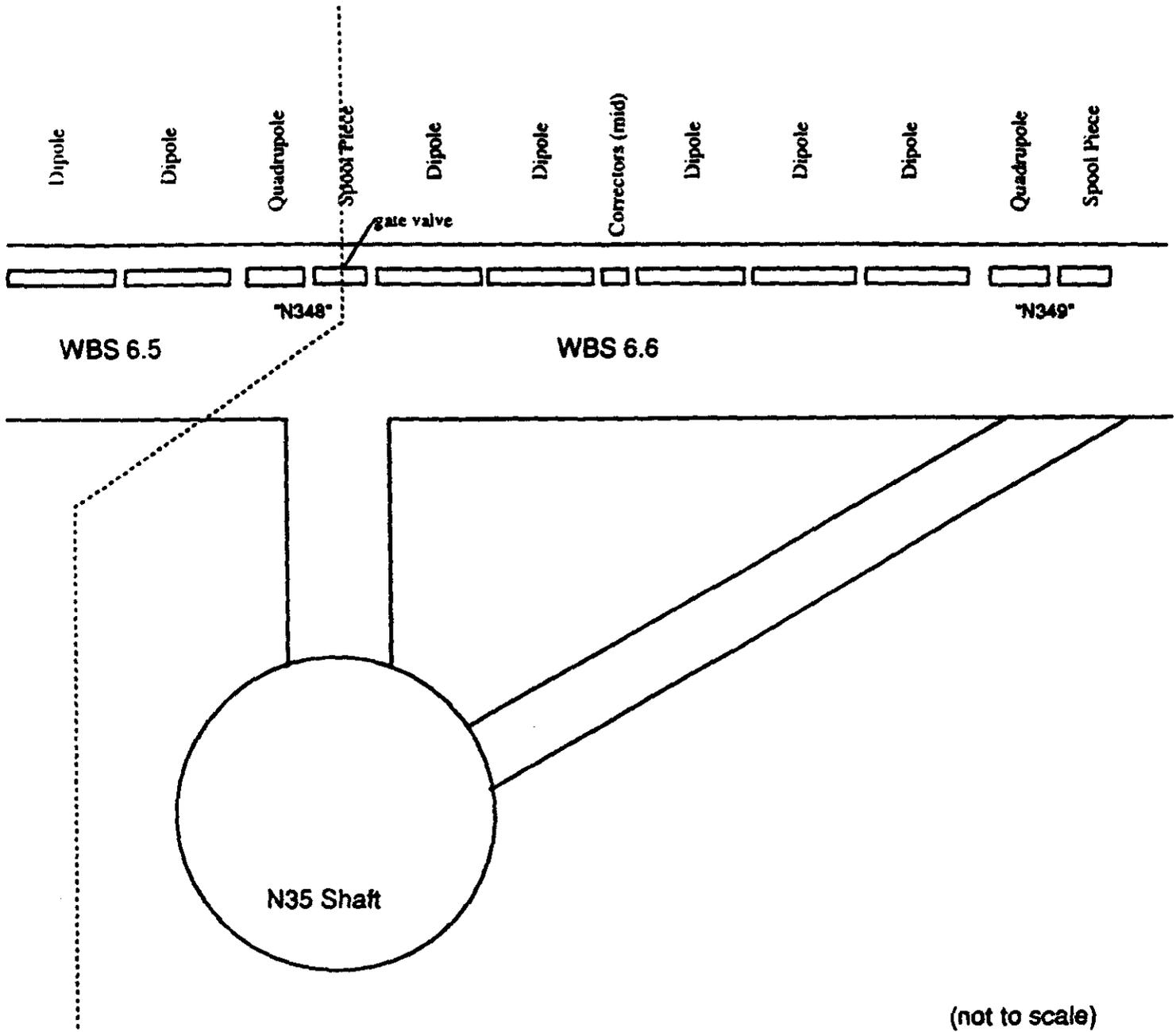
SAMPLE OF TUNNEL
AND
SERVICE AREA DESIGNATIONS
(ARC)



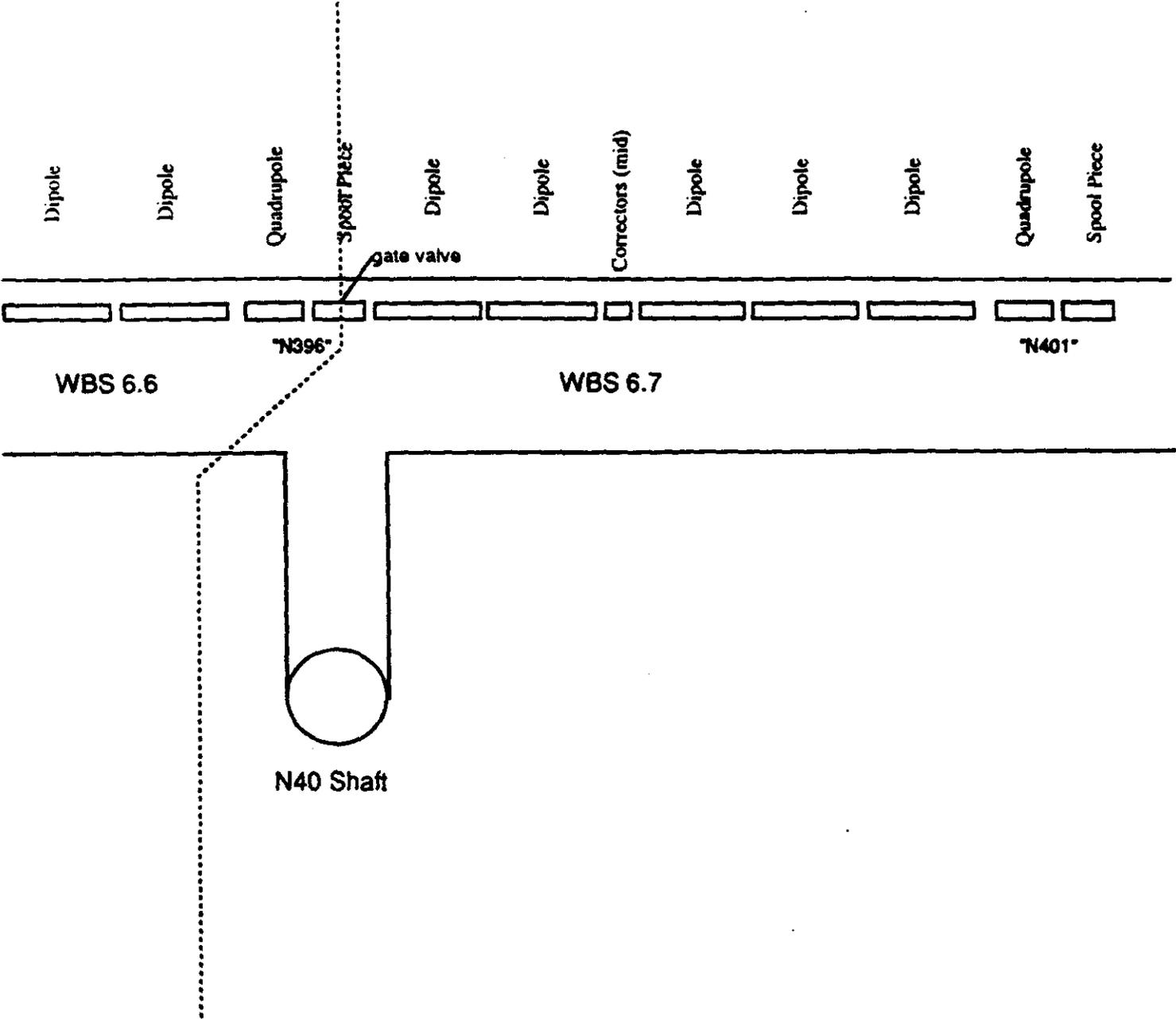
WBS NUMBERING SCHEME



Sample WBS Division



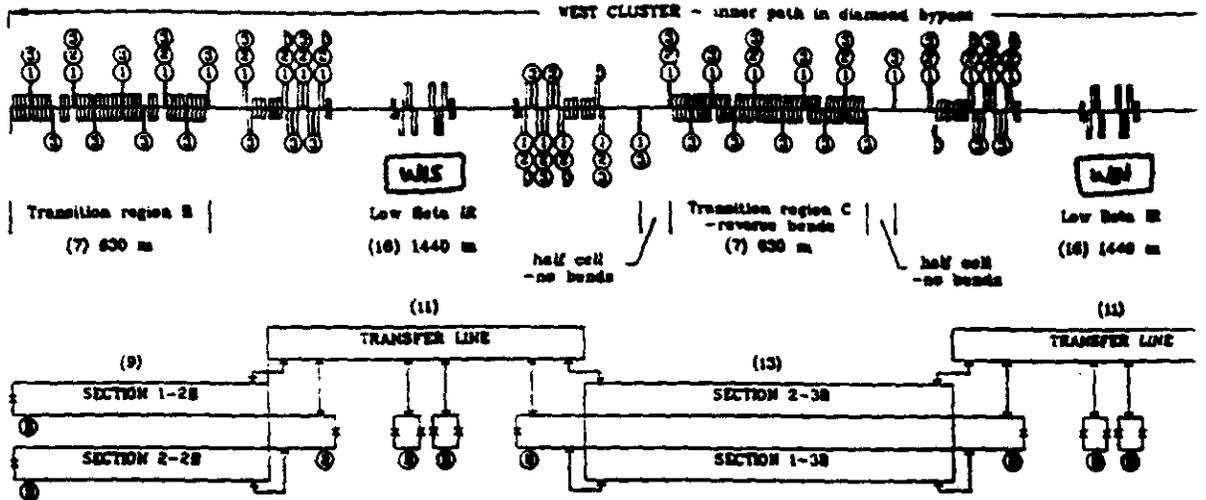
Sample WBS Division



(not to scale)

WEST CLUSTER

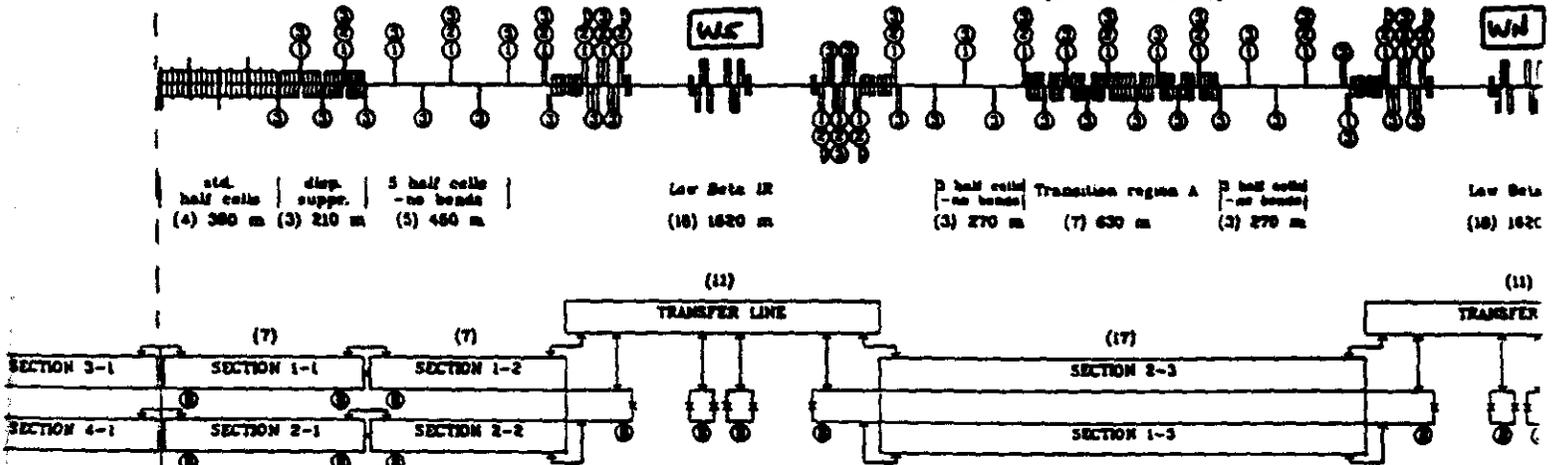
WBS 6.22



SOUTH ARC

WEST CLUSTER

outer path in diamond bypass



BS 6.19

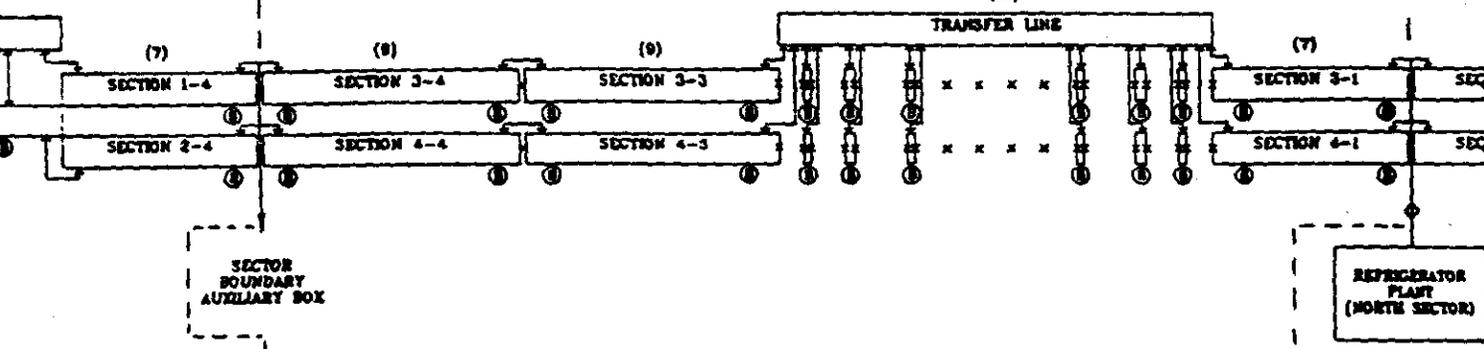
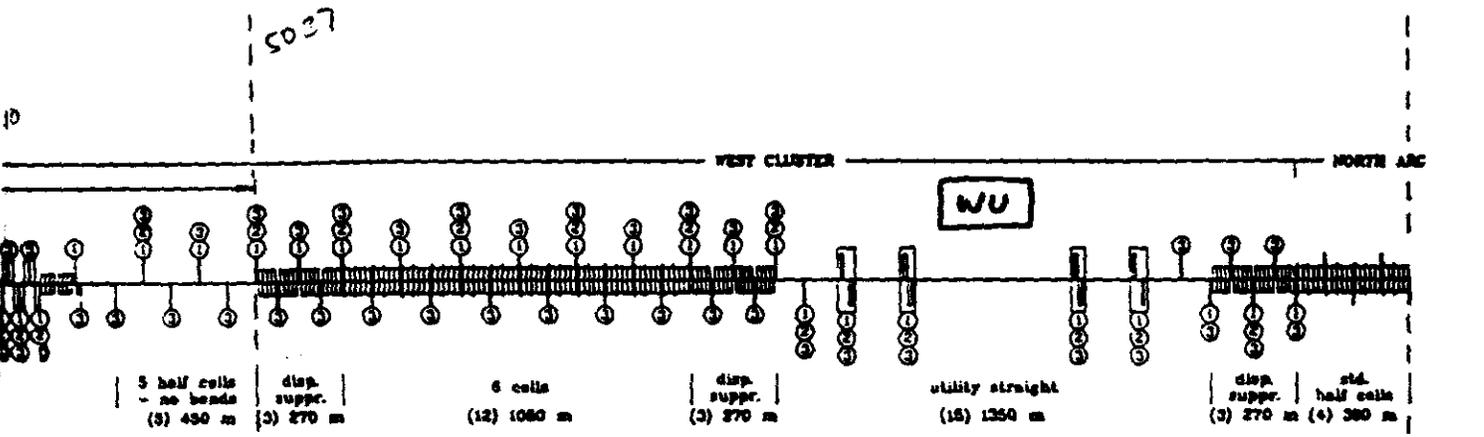
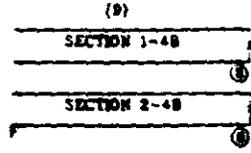
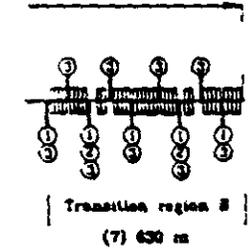
WBS 6.20

TAILS

LEGEND OF VACUUM SYMBOLS**

- ① 1-all metal hand valve, 1-"O"-ring hand valve, 1-20 l/s ion pump
- ② 1-piranai gauge, 1-cold cathode gauge, 1-buds ion gauge
- ③ beam tube burst disk
- x 3 inch gate valve
- ④ 2-2 inch pump down valves, 2-piranai gauges, 2-cold cathode gauges
- ⑤ 1-2 inch pump down valve, 1-piranai gauge, 1-cold cathode gauge

**PLEASE NOTE ONLY 1 PIPE IS SHOWN. COMPONENTS FOR THE OTHER PIPE ARE THE SAME IN NUMBERS ONLY NUMBERED BY LOCATION.



WBS 6.20

WBS 6.1

WBS 6.2

(5377m)
~17,707'

(3663m)
(11,867')

DATE: 04/08/90	BY: D. BUTT	SSCL SUPERCONDUCTING SUPER COLLIDER LABORATORY 2000 ROCKWELL AVENUE SUITE 300 DALLAS TEXAS 75229-3940
SCHEMATIC LAYOUT OF WEST CLUSTER		
DATE: 04/08/90	BY: D. BUTT	