

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8709290085 DOC. DATE: 87/09/22 NOTARIZED: NO DOCKET #
 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
 AUTH. NAME AUTHOR AFFILIATION
 KOBER, R. W. Rochester Gas & Electric Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 STAHL, C. Document Control Branch (Document Control Desk)

SUBJECT: Notifies that util intends to pursue steam generator snubber replacement program. Objective of program to replace six of eight hydraulic snubbers during Feb 1988 refueling outage. Brief technical description of analysis encl.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 11
 TITLE: OR Submittal: General Distribution

NOTES: License Exp date in accordance with 10CFR2.2.109(9/19/72). 05000244

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD1-3 LA	1 0	PD1-3 PD	5 5
	STAHL, C	1 1		
INTERNAL:	ARM/DAF/LFMB	1 0	NRR/DEST/ADS	1 1
	NRR/DEST/CEB	1 1	NRR/DEST/MTB	1 1
	NRR/DEST/RSB	1 1	NRR/DOEA/TSB	1 1
	NRR/PMAS/ILRB	1 1	OGC/HDS2	1 0
	<u>REG FILE</u> 01	1 1	RES/DE/EIB	1 1
EXTERNAL:	EG&G BRUSKE, S	1 1	LPDR	1 1
	NRC PDR	1 1	NSIC	1 1



ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001

ROGER W. KOBER
VICE PRESIDENT
ELECTRIC PRODUCTION

TELEPHONE
AREA CODE 716 546-2700



September 22, 1987

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Mr. Carl Stahle
PWR Project Directorate No. 1
Washington, D.C. 20555

Subject: Steam Generator Snubber Replacement Program
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

1987 SEP 28 A 9:54
USNRC-DS

Dear Mr. Stahle:

Rochester Gas and Electric intends to pursue a steam generator snubber replacement program. The objective of this program is to replace six of the eight hydraulic snubbers per steam generator with rigid structural members during the refueling outage beginning in February 1988. This replacement will reduce required maintenance activities and aid in keeping radiation exposures as low as reasonably achievable (ALARA).

Enclosed is a brief technical description of the analysis that will be performed to provide the justification for the snubber replacement. This analysis will involve the application of both updated pipe break design criteria to reduce maximum loads on the reactor coolant loop support system, and the change to MEB BTP 3-1 (Generic Letter 87-11) to eliminate arbitrary intermediate breaks in the main steam lines.

Consistent with your discussions with members of the RG&E staff, it is our intention to perform this replacement as a plant modification subject to review per 10CFR50.59. There are no changes to the Technical Specifications required beyond those previously submitted on August 1, 1983 (last updated July 24, 1987) which retains operability and surveillance requirements for snubbers but which removes the lists of snubbers from the Technical Specifications. We anticipate that approval of that proposed change to the Technical Specifications will occur by the 1988 outage.

8709290085 870922
PDR ADDCK 05000244
P PDR

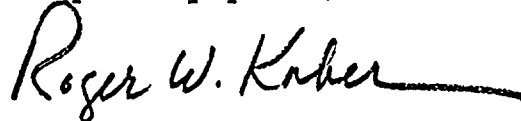
A001
1W

00-00000

000 A 000000

We are planning to meet with the NRC Staff on September 28, 1987 to discuss this matter further. We request that a written indication of your concurrence with this application of 10CFR50.59 be received no later than October 23, 1987 as changes or additional reviews beyond this date could prevent the replacement from occurring during the 1988 outage. If no written indication is received by this date, we will assume your concurrence and proceed with the program as planned.

Very truly yours,

A handwritten signature in cursive script that reads "Roger W. Kober". The signature is written in dark ink and has a long, horizontal flourish extending to the right.

Roger W. Kober

Enclosure

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

Name	Address
Mr. A. B. C.	123 Main St., New York, N.Y.
Mr. D. E. F.	456 Elm St., Boston, Mass.
Mr. G. H. I.	789 Oak St., Chicago, Ill.
Mr. J. K. L.	101 Pine St., Philadelphia, Pa.
Mr. M. N. O.	202 Cedar St., St. Louis, Mo.
Mr. P. Q. R.	303 Birch St., San Francisco, Cal.
Mr. S. T. U.	404 Spruce St., Portland, Me.
Mr. V. W. X.	505 Ash St., Cincinnati, Ohio.
Mr. Y. Z. A.	606 Hickory St., Louisville, Ky.
Mr. B. C. D.	707 Walnut St., New Orleans, La.
Mr. E. F. G.	808 Chestnut St., Memphis, Tenn.
Mr. H. I. J.	909 Sycamore St., Little Rock, Ark.
Mr. K. L. M.	1010 Magnolia St., Jackson, Miss.
Mr. N. O. P.	1111 Dogwood St., Tallahassee, Fla.
Mr. Q. R. S.	1212 Redwood St., Honolulu, T.H.
Mr. T. U. V.	1313 Cypress St., Hilo, Hawaii.
Mr. W. X. Y.	1414 Fir St., Kailua, Hawaii.
Mr. Z. A. B.	1515 Palm St., Honolulu, T.H.

2. The second part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

Name	Address
Mr. A. B. C.	123 Main St., New York, N.Y.
Mr. D. E. F.	456 Elm St., Boston, Mass.
Mr. G. H. I.	789 Oak St., Chicago, Ill.
Mr. J. K. L.	101 Pine St., Philadelphia, Pa.
Mr. M. N. O.	202 Cedar St., St. Louis, Mo.
Mr. P. Q. R.	303 Birch St., San Francisco, Cal.
Mr. S. T. U.	404 Spruce St., Portland, Me.
Mr. V. W. X.	505 Ash St., Cincinnati, Ohio.
Mr. Y. Z. A.	606 Hickory St., Louisville, Ky.
Mr. B. C. D.	707 Walnut St., New Orleans, La.
Mr. E. F. G.	808 Chestnut St., Memphis, Tenn.
Mr. H. I. J.	909 Sycamore St., Little Rock, Ark.
Mr. K. L. M.	1010 Magnolia St., Jackson, Miss.
Mr. N. O. P.	1111 Dogwood St., Tallahassee, Fla.
Mr. Q. R. S.	1212 Redwood St., Honolulu, T.H.
Mr. T. U. V.	1313 Cypress St., Hilo, Hawaii.
Mr. W. X. Y.	1414 Fir St., Kailua, Hawaii.
Mr. Z. A. B.	1515 Palm St., Honolulu, T.H.

ROCHESTER GAS & ELECTRIC CORPORATION
STEAM GENERATOR HYDRAULIC SNUBBER REPLACEMENT PROGRAM
TECHNICAL SUMMARY

1.0 Introduction

The upper portion of each of the two steam generators at Ginna Station are currently restrained against lateral seismic and pipe break loads by eight, large (532,000 lb. capacity) hydraulic shock arrestors (snubbers) as shown in Figure 1. An independent set of supports provide lateral and vertical restraint to the lower portion of each SG. The required maintenance, in-service inspection and testing are performed during annual refueling outages. Surveillance activities are performed periodically throughout the year.

2.0 Program Description

The intent of the proposed upper lateral support modification is to replace six of the eight hydraulic snubbers per SG with rigid structural members (bumpers), thereby minimizing the number of hydraulic snubbers in service for this application. In this way, annual maintenance activities and, consequently, ALARA radiation exposures to maintenance personnel can also be minimized. The hydraulic snubbers replaced with bumpers will be refurbished, and stored for use as spares. It is expected that spare parts procurement, as well as utilization of shop facilities and rigging equipment, can be optimized as a result of this replacement. A pair of existing snubbers will remain in place at each SG in the direction of reactor coolant loop (RCL) thermal growth as shown in Figure 3. This arrangement provides sufficient design load capacity and represents a reliable support configuration. The design of the existing hydraulic snubbers (manufactured by Anker-Holth) employs a passive-type orifice design. Control valves are not used and, therefore, the failure of such valves (the predominant failure mode of other large-bore snubbers as discussed in IE Bulletin 86-102) is not applicable. The rigid structural members (bumpers) which will replace some of the hydraulic snubbers will be equally, if not more, reliable.

3.0 Design Basis Loads

The SG hydraulic snubber replacement program will assure that adequate support capacity is maintained with respect to the design basis loads. The current controlling design load for the SG upper lateral support system is an intermediate pipe break in the horizontal main steam line near the top of the SG (See Figure 2). NRC Generic Letter 87-11, "Relaxation

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

[illegible]

in Arbitrary Intermediate Pipe Rupture Requirements", provides guidance for elimination of arbitrary intermediate breaks and will be applied to this program. Previous piping upgrade program analyses (recently reviewed in NRC Inspection 87-11), using ANSI B31.1 criteria, have been reviewed and will be revised as necessary to reflect changes resulting from this snubber replacement program. Consistent with Generic Letter 87-11, these analyses have established that no intermediate pipe breaks need to be postulated in the Main Steam (MS) or Feedwater (FW) piping. Terminal-end breaks at the FW inlet nozzles are now the limiting load and are the new design basis loads.

4.0 Piping Systems Analysis

The effect of the new design basis loads upon the RCS equipment and piping support system are being analyzed by Westinghouse. An independent review by a consultant with broad experience in RCS support design is also planned.

The use of rigid structural members (bumpers) in the SG upper lateral support system will change the degree of stiffness with which the SGs are restrained against dynamic loads (See Figures 4 and 5). These new stiffnesses have been calculated and results so far indicate that RCS stresses and deflections will not change significantly. Loads from a pipe break postulated to occur in an auxiliary line (RHR, SI accumulator or surge line) branch connection will also be determined using the new upper lateral support stiffnesses to assess the effect on the reactor coolant loop piping, equipment supports and the new SG upper support configuration.

The seismic response spectra and damping values used in this work will conform to Regulatory Guide 1.60 and 1.61, respectively. Modal responses and spatial components will be combined in accordance with Regulatory Guide 1.92. Results of the existing RCS Leak Before Break (LBB) analysis will be reviewed (resolution of the Asymmetric Loads issue which employed LBB is documented in an NRC letter dated September 9, 1986).

5.0 Rigid Structural Members (Bumpers)

The replacement support hardware consists of individual structural assemblies which will be installed wherever an existing hydraulic snubber is removed. A typical assembly is shown in Figure 6. Each assembly is structurally rigid under compression but will allow freedom of movement in the tensile direction. Each assembly is individually adjustable in the field to ensure that clearances at each bumper position are adequate for expansion but do not exceed those permitted by the analysis. The assembly and its subparts

1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is responsible for the study. The investigator must first identify the problem and then determine the scope of the study. The next step is to design the study. This involves determining the methods to be used and the data to be collected. The third step is to collect the data. This is done by the investigator who is responsible for the study. The fourth step is to analyze the data. This is done by the investigator who is responsible for the study. The fifth step is to interpret the results. This is done by the investigator who is responsible for the study. The sixth step is to write the report. This is done by the investigator who is responsible for the study. The seventh step is to present the results. This is done by the investigator who is responsible for the study. The eighth step is to discuss the results. This is done by the investigator who is responsible for the study. The ninth step is to conclude the study. This is done by the investigator who is responsible for the study. The tenth step is to publish the results. This is done by the investigator who is responsible for the study.

[illegible]

1. *Pharmaceuticals*: The pharmaceutical industry is a major player in the healthcare market, with a focus on research and development of new drugs. Key companies include Pfizer, Johnson & Johnson, and Novartis.

2. *Medical Devices*: This sector includes companies that manufacture medical equipment and devices, such as diagnostic imaging machines, surgical instruments, and prosthetics. Examples include Medtronic, GE Healthcare, and Abbott.

3. *Health Insurance*: Health insurance companies provide financial protection against the costs of medical services. Major players include UnitedHealthcare, Anthem, and Cigna.

4. *Biotechnology*: The biotechnology sector focuses on the application of biological processes and technology to develop new products and therapies. Key companies include Amgen, Genentech, and Moderna.

5. *Healthcare Services*: This category includes companies that provide various healthcare services, such as hospital management, medical consulting, and patient care. Examples include United Therapeutics, Allergan, and Amgen.

6. *Pharmaceuticals*: The pharmaceutical industry is a major player in the healthcare market, with a focus on research and development of new drugs. Key companies include Pfizer, Johnson & Johnson, and Novartis.

7. *Medical Devices*: This sector includes companies that manufacture medical equipment and devices, such as diagnostic imaging machines, surgical instruments, and prosthetics. Examples include Medtronic, GE Healthcare, and Abbott.

8. *Health Insurance*: Health insurance companies provide financial protection against the costs of medical services. Major players include UnitedHealthcare, Anthem, and Cigna.

9. *Biotechnology*: The biotechnology sector focuses on the application of biological processes and technology to develop new products and therapies. Key companies include Amgen, Genentech, and Moderna.

10. *Healthcare Services*: This category includes companies that provide various healthcare services, such as hospital management, medical consulting, and patient care. Examples include United Therapeutics, Allergan, and Amgen.

are sized, and analyzed, to withstand the new Design Basis Load. The assemblies will be designed and constructed to the requirements of the American Institute of Steel Construction (AISC), which was the industry code used for the original plant major component supports. Detailed design of the rigid structural members is being performed by RG&E. Fabrication will be performed by a qualified supplier.

Load combinations will be combined in accordance with the Standard Review Plan Section 3.9.3 Appendix A and NUREG-0484.

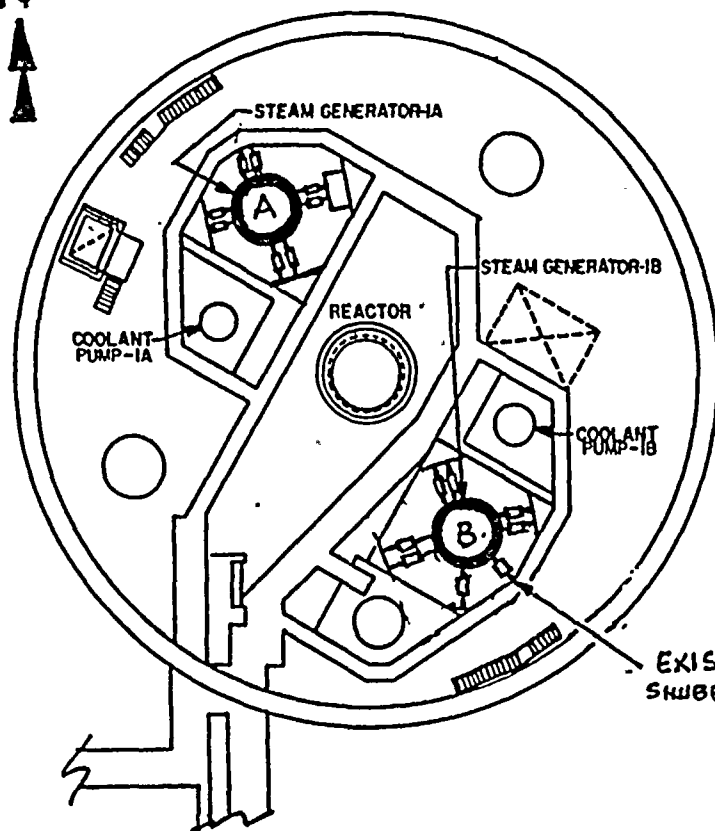
6.0 Licensing Activities

No revisions to the Ginna Technical Specifications are contemplated. Previous applications have been made to remove the specific listing of safety-related snubbers from Technical Specifications. Operability and surveillance requirements for remaining snubbers have not been changed. A safety evaluation of the modification in accordance with 10CFR50.59 will be performed. The Ginna Station Updated Safety Analysis Report (UFSAR) will be revised as appropriate.

RECEIVED AT THE OFFICE OF THE SECRETARY OF THE ARMY
WASHINGTON, D. C. 20315
JAN 10 1966
FROM THE DIRECTOR OF THE ARMY
OFFICE OF THE SECRETARY OF THE ARMY
WASHINGTON, D. C. 20315
SUBJECT: [Illegible]

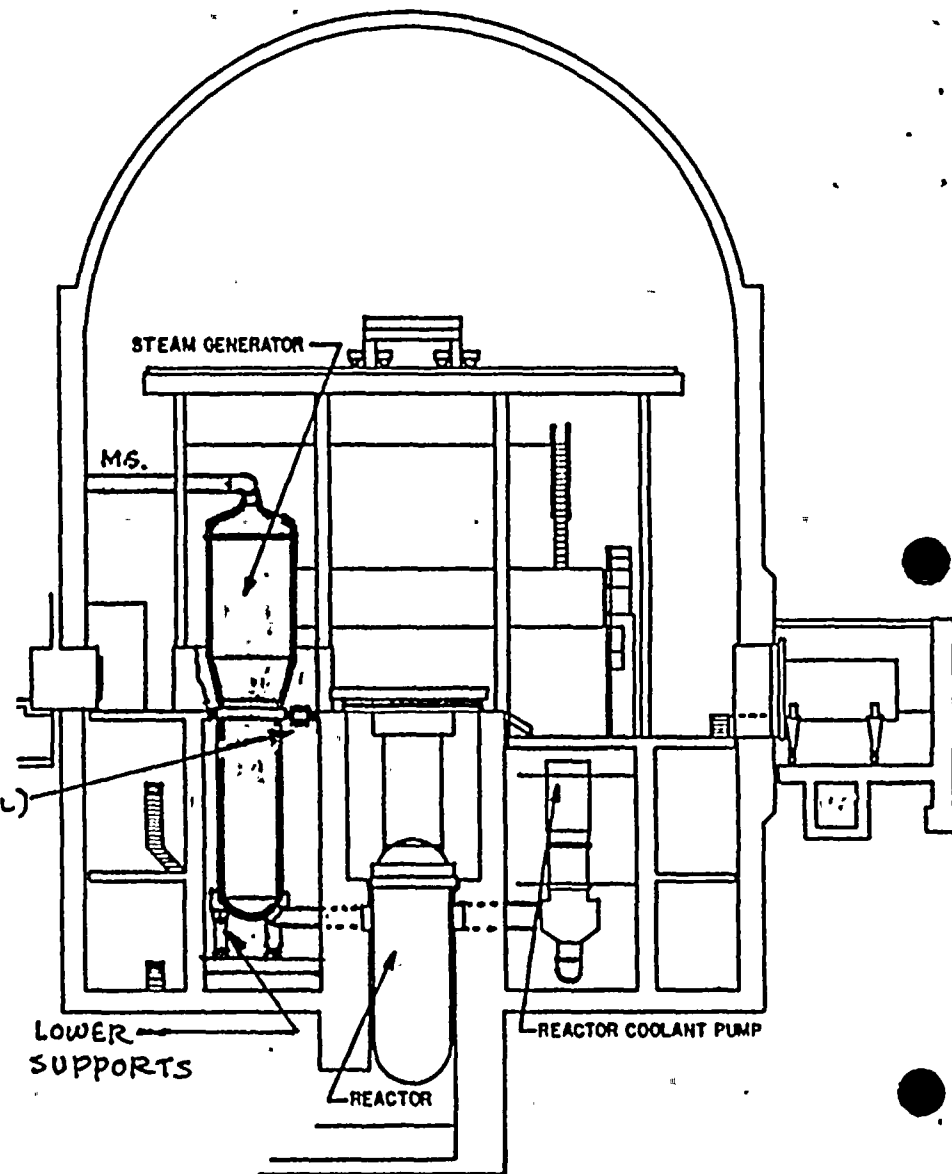
[Illegible text block]

[Illegible text block]



REACTOR BLDG.
PLAN

EXISTING
SNUBBERS (TYPICAL)



ELEVATION

FIGURE 1

GINNA. STATION STEAM GENERATOR SNUBBERS-LAYOUT

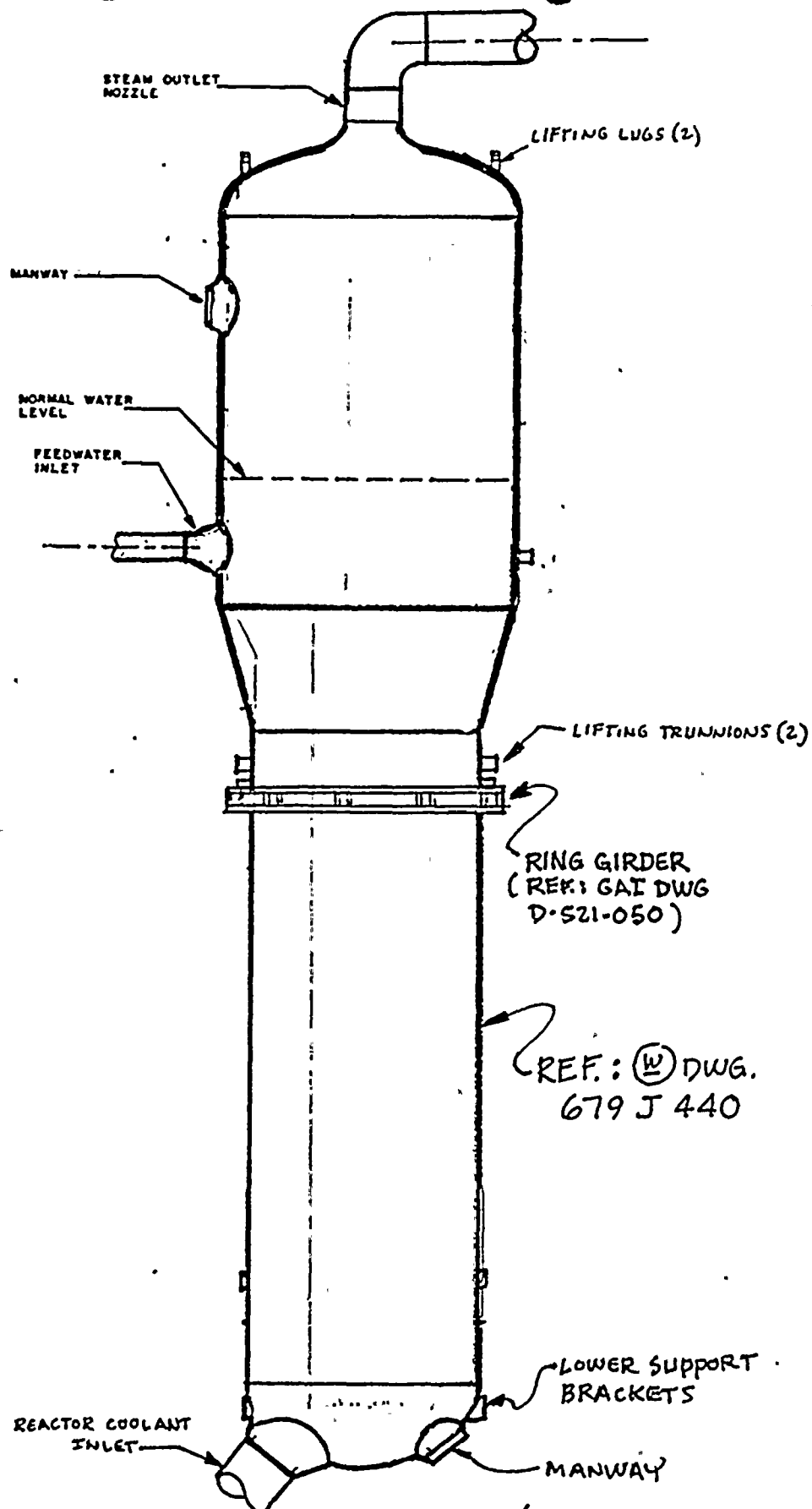


FIGURE 2

STEAM GENERATOR 1A/1B
(TYPICAL)

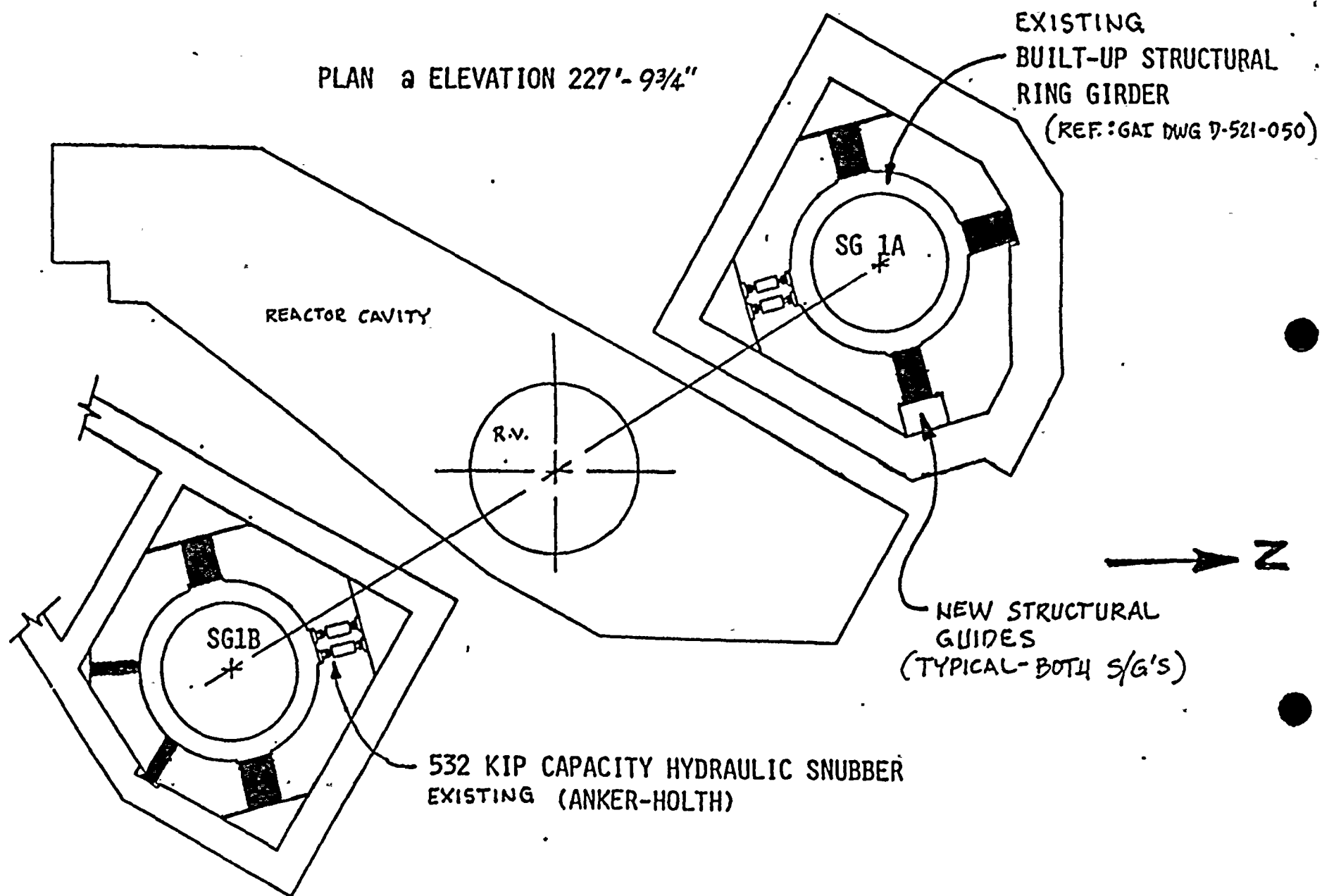


FIGURE 3

GINNA STEAM GENERATOR SNUBBERS-STRUCTURAL MODIFICATION

Jcm 8-1-86/9-15-87

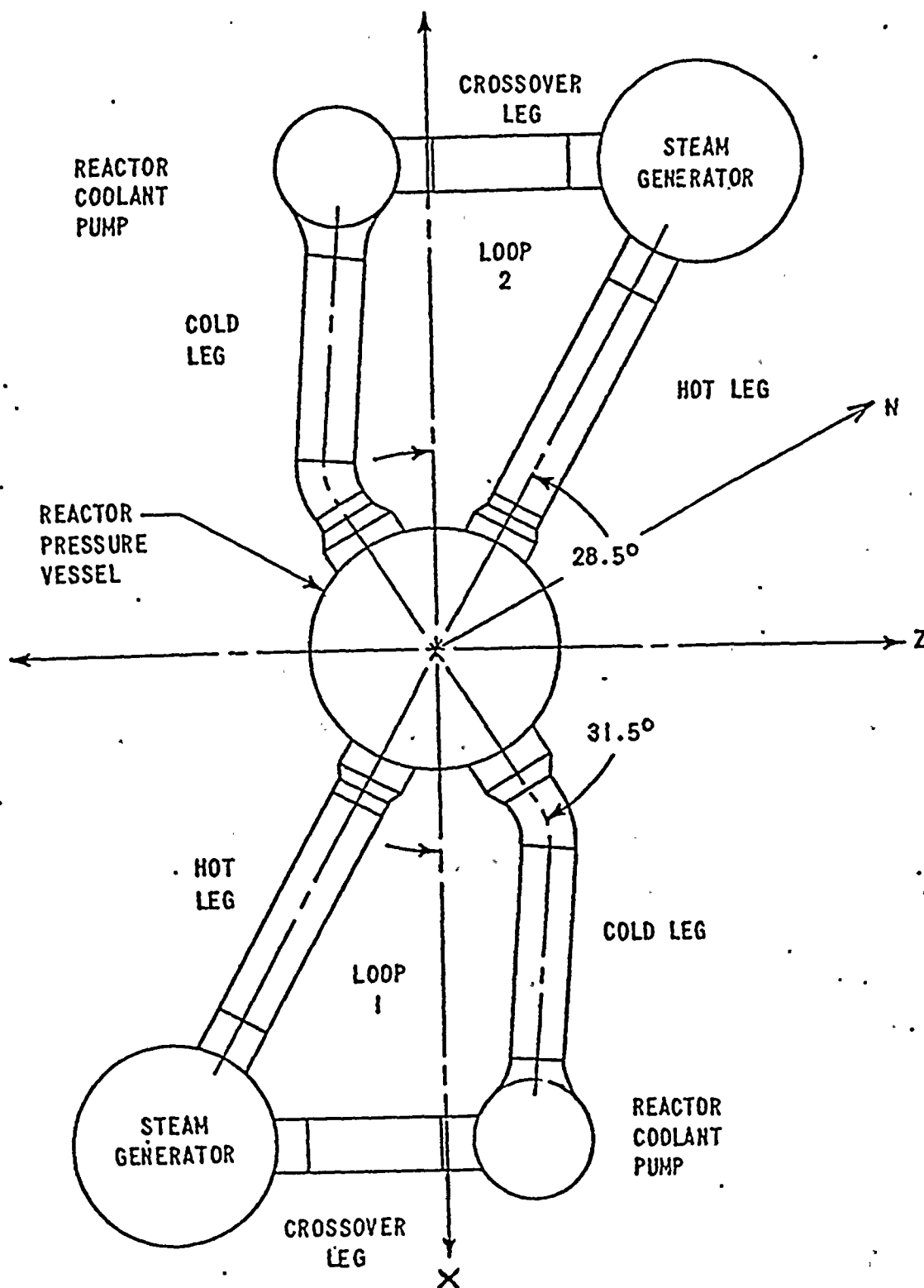


Figure 4 Reactor Coolant Loop Coordinate System

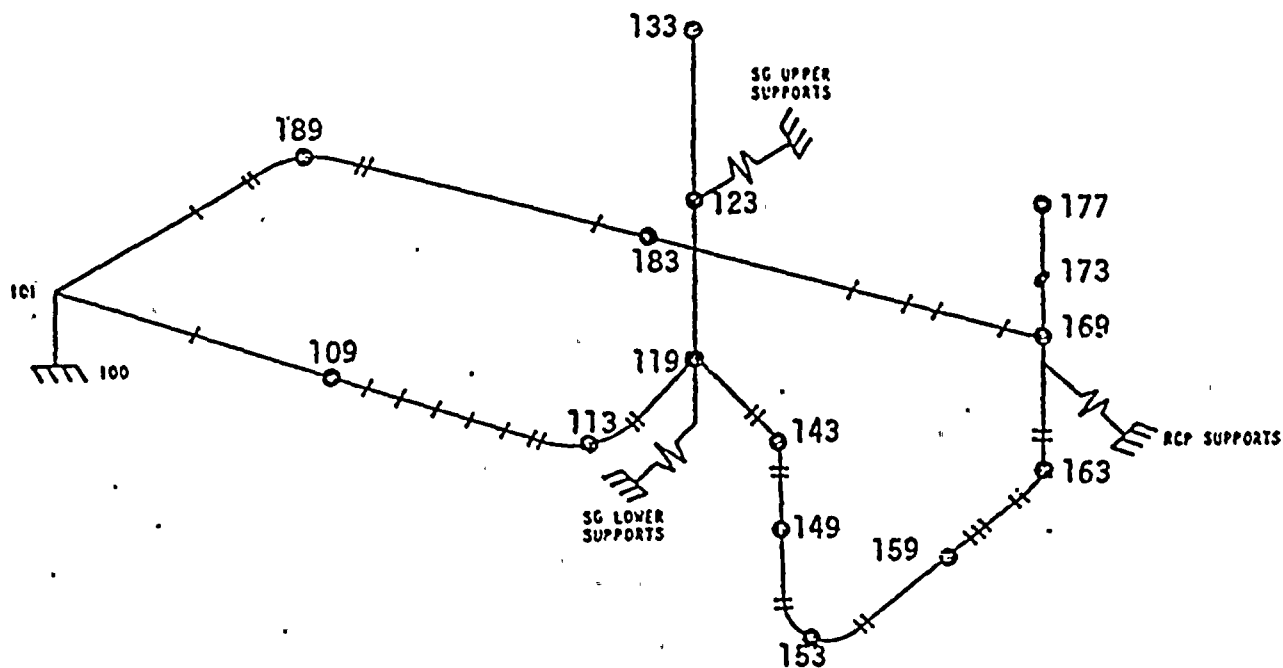


FIGURE 5

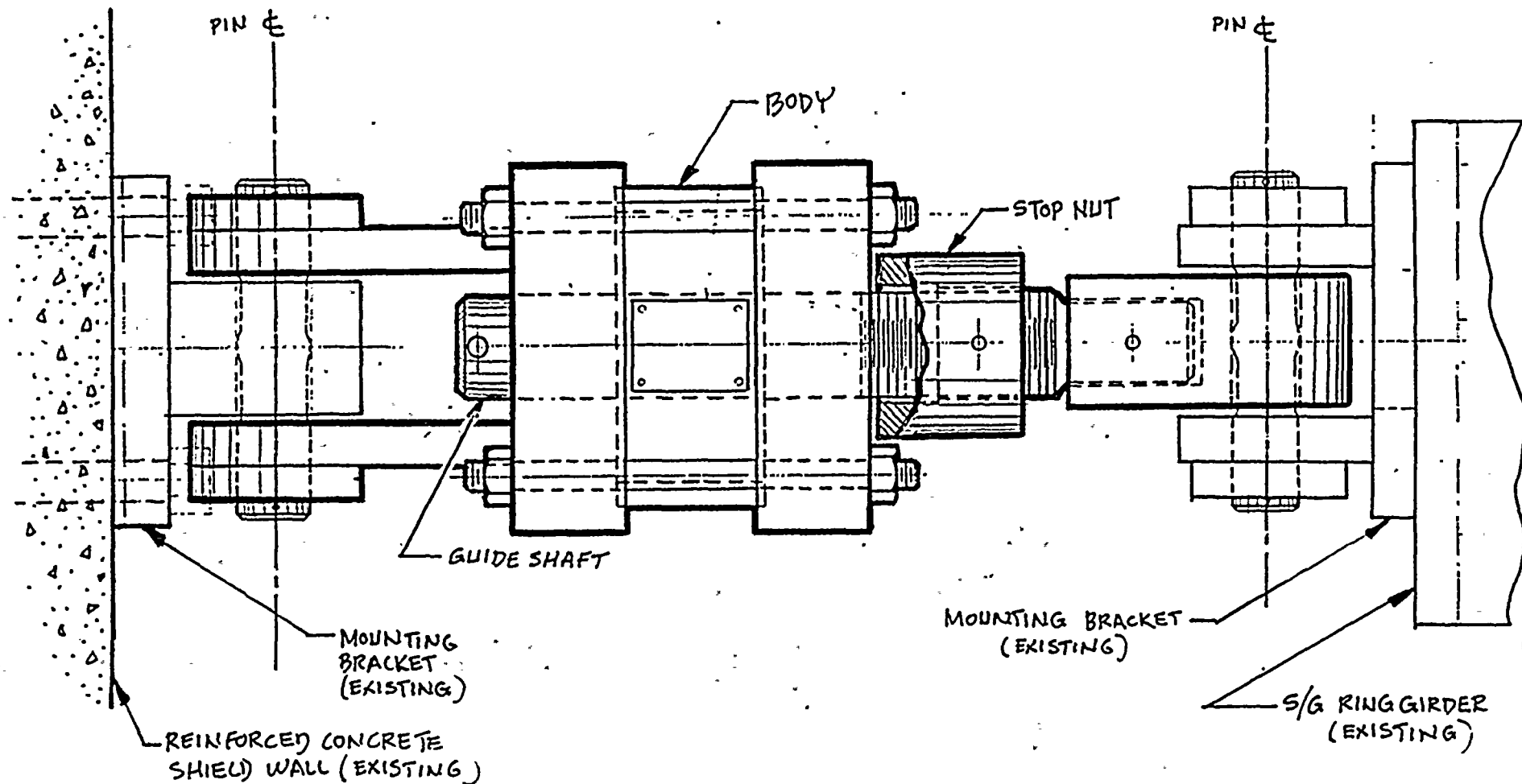


FIGURE 6
RIGID STRUCTURAL MEMBER (BUMPER)
(TYPICAL)

