

ARMED SERVICES EXPLOSIVES SAFETY BOARD

In reply refer to  
ASESB 862-58/1

1 December 1958

MEMORANDUM FOR THE BOARD

SUBJECT: Resumé of the 187th Meeting of the ASESB, 24 November 1958

- Present:
- Capt. W. T. Jenkins, USN, Chairman
  - Col. R. C. Costabile, USA, Army Member
  - Capt. C. McKellar, USN, Navy Member
  - Col. R. T. Fincke, USAF, Air Force Member
  - Mr. F. M. Bishoff, Alt. Army Member
  - Mr. J. A. Tyler, OCO, D/A
  - Mr. H. M. Roylance, Alt. Navy Member
  - Mr. F. Z. Hough, BuOrd, D/N
  - Mr. G. F. Wigger, OCE, D/A
  - Col. A. W. Hamilton, USA, ASESB
  - Lt. Col. G. Couch, USAF, "
  - Mr. W. M. Wiessenberg, "
  - Dr. Ralph Tisley, "
  - Mr. F. N. McNamara, "
  - Mr. R. G. Perkins, "
  - Mr. C. A. Breeding, "
  - Mr. R. C. Herman, "

1. The Chairman informed the members that he had been requested to be in the office of the Honorable Mr. Higgins, Asst. Secretary of the Army, at 1130 when the Deputy Assistant, Mr. Courtney Johnson, briefs Mr. Higgins on a memorandum prepared for transmittal to the OSD, relative to the proposed revised charter for the ASESB.

2. Mr. F. M. Bishoff, the Army Alternate Member, repeated, for the information of the Board, a presentation he recently made to the Special Civilian Committee on Safety of Employment of Army Air Defense Weapons. This was followed by a question and answer period.

3. A discussion of the Piers & Wharves Manual recently sent to the Service Secretaries by the Board revealed that there is some doubt within the Services as to what action is required, particularly with respect to Chapter IV. It was pointed out that the memo transmitting the manual to the Secretaries stated "The Board plans to submit the quantity-distance requirements (Chapter IV) of the manual to the Assistant Secretary of Defense (S&L) at a later date as a proposed Department of Defense Directive." The Army Member urged that promulgation of the DOD Directive be expedited.

4. The Board was briefed on recent communications relative to Mr. Harman's attendance at a NATO conference on minimum quantity-distance standards for use by NATO countries. The Board was informed of limitations that had been placed on Mr. Harman by a communication from DCS/Log. Discussion brought out the feeling of the Board Members that Mr. Harman should not be limited to merely pointing out differences between the proposed NATO standards and existing U. S. standards. If so limited, there would be little use of his making the trip. Mr. Harman should be free to assist in working up a recommended NATO position on quantity-distance. The discussion revealed that the Board Members agreed with the Chairman's viewpoint on Mr. Harman's attendance at the NATO meeting.

5. The Members agreed that the regular December meeting be eliminated, due to the holiday period and that the next regular meeting be held in January.

*W. T. Jenkins*  
W. T. JENKINS  
Captain, USN  
Chairman



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VERBATIM TRANSCRIPT, BOARD MEETING NO. 187, 24 NOVEMBER 1958

Present: Capt. W. T. Jenkins, USN  
Col. R. C. Costabile, USA, Army Member  
Capt. C. McKellar, USN, Navy Member  
Col. R. T. Fincke, USAF, Air Force Member  
Mr. F. M. Bishoff, Alt. Army Member  
Mr. J. A. Tyler, OCO, D/A  
Mr. H. M. Roylance, Alt. Navy Member  
Mr. F. Z. Hough, BuOrd, D/N  
Mr. G. F. Wigger, OCE, D/A  
Col. A. W. Hamilton, USA, ASESEB  
Lt. Col. G. Couch, USAF, "  
Mr. W. M. Wiesenberg, "  
Dr. Ralph Ilsley, "  
Mr. F. N. McNamara, "  
Mr. R. G. Perkins, "  
Mr. C. A. Breeding, "  
Mr. R. C. Herman, "

Capt. Jenkins: The 187th meeting of the Board will come to order. (Chairman introduced new members, Capt. McKellar and Mr. Bishoff.) The charter has been a very active project recently, as many of you well know. I had to go over to see Mr. Johnson last week with Mr. Marsh, concerning certain features of it, recommending, in effect, that we give it a decent burial. Mr. Johnson is going to present a memorandum that we prepared for Mr. Higgins signature to Mr. Higgins this morning and it was felt that I should be there. So I will have to excuse myself during the meeting in order to get over there by 1130 when this memorandum is officially presented to him. Mr. Johnson, has recommended that I prepare a detailed memo for his information on the background and history of the charter, and I have that memorandum ready to take with me. I still hope we can forget this proposed revised charter and continue on under the old charter. If it is satisfactory with the Members, Col. Hamilton will guide the meeting after I leave. There are a couple of items to be taken up, one is pertaining to Mr. Herman's participation in the Nato conference. I have a little memorandum prepared on it and I'd like to get your reactions, there is no formal vote necessary. We have scheduled for this morning a presentation by Army representatives, an outgrowth

of a presentation Mr. Bishoff made to the Special Civilian Committee on the Safety of Employment of Army Air Defense Weapons. We appreciate your coming over here to give it to us. Col. Costabile.

Col. Costabile: The only introductory note that I would like to make about Mr. Bishoff's presentation is that it's not an insult upon your intelligence, it's a rather basic presentation in that it was designed to explain to a group of prominent civilians in industry what the Army has done in deployment of their air defense weapons and our basic responsibility was to present the quantity-distance relationships as they apply to various sites and in general to acquaint them with basic definitions. As a result of this five day session with civilian industry, we received a report officially, last week, at which time they stated the Army had employed a system that had looked into all phases of safety and engineering and distance. In general they felt that the inherent risk of obtaining any type of missile defense had been accepted. This presentation is rather basic, but it is chronologically prepared and explains some of the background of the missile quantity-distances and does not necessarily reflect the opinions of this Board.

Mr. Bishoff: (begins on next page)

pages 3860 thru 3870 ~~SECRET RESTRICTED DATA~~

filed in classified book

Capt. Jenkins: Thank you very much Mr. Bishoff. I might mention that the files are full of a lot of correspondence between the Board and the Army Ordnance on some of the things you mentioned. A lot of the material we agree with you on and some of it we don't but the whole tenor of the thing is to get on with these tests and find out what exactly is going to happen when the missiles are subjected to an explosion.

Mr. Bishoff: We were quite frank with the committee. Where we had tests, we enumerated ~~and~~ them, where we had no tests we told them how we had analyzed the available information and the reasons for our acceptance. The files which you mentioned Capt. Jenkins were used as background material for this presentation.

Capt. Jenkins: As I said it was a very fine presentation and whenever I have had discussions with the Secretaries, etc., I have always ended up by saying that in spite of the ~~difficulties~~ the thing to do is to get on with these tests and find out what's going to happen. Does anyone have any questions?

Capt. McKellar: How many missiles were involved in that explosion at Middletown?

Col. Costabile: There were 13 missiles up and 8 were involved. Most of the damage was done by orientation of the steel that penetrated the booster or penetrated the warhead section. That's what set them off. There were only four that were directly involved in the blast.

Mr. Bishoff: If the incident did nothing else it convinced the ARADCOM that the missiles had to be underground.

Dr. Ilsley: I'd like to ask one question. Since this whole presentation has been built so strenuously around state laws, ~~I would like to ask one question~~, was the ASESB ever mentioned by name in the discussion?

Col. Costabile: The presentation you received Dr. Ilsley was exactly as it was made.

Dr. Ilsley: The answer is no.

Dr. Ilsley: Another point I'd like to bring up is that the ASESB was a member of the Nuclear Safety Working Group and that was left out. That's all I have to say.

Col. Fincke: I don't see the pertinency of it, the DOD regulation under which we all operate was gone into here.

Dr. Ilsley: It was mentioned once as the basis of which this was done and I haven't seen in any one of the charts any further reference to the DOD directive. The only thing I've heard is state laws.

Capt. Jenkins: Again I say the files are full of controversies and disagreements.

Mr. Bishoff: I'd like to correct an impression Dr. Ilsley: All figures given on these charts are DOD directive figures except the one where we used 1/4 distance and that was explained to the committee.

Mr. Perkins: In the storage configurations that you have described, this is a normal desired standard. You hope that ultimately all of the sites will come up to that. I presume that you're well aware that many of them do not at the moment. In the case of a site that has in a single pit two Hercules and approximately six Ajax plus about six to ten extra sets of warheads, a total under the 25,000 lbs. that you figure on but approximating 25,000 lbs. total and the warheads in the corner of the pit so that they are reasonably close to the booster of the outside of the Ajax missile, ~~shocks~~ Do you feel that an adequate degree of safety is provided? How do you feel about that distance within the pit?

Mr. Bishoff: I'll have to answer you this way. The information that I gave the committee was the design information that resulted finally in the OCE drawing which established the location of the facilities at the proper distances.

Perhaps the Board will recall that the Army Chief of Ordnance was delegated the responsibility and the authority to waive quantity-distance requirements ~~at~~ that the

ARADCOM sites. We did quite diligently for a time. Then the ARADCOM said that they wanted to train with four live missiles above the box. The Chief of Ordnance refused to grant the waiver. The Board was consulted, Dr. Ilsley, and gave the Chief of Ordnance some support. I can't say that it was full support. The matter was finally resolved by the Vice Chief of Staff of the Army by removing from the Chief of Ordnance the authority to grant waivers at Air Defense Command sites and giving that responsibility to the ARADCOM Commanding General. Our experience accident-wise under this procedure was good up until Middletown and I think that Middletown, although it unfortunately killed ten people, in the long run is going to prove a boon to the Army. The attitude in the Air Defense Command has changed considerably. We have held meetings with them and with other supporting agencies in the Army in order to take the proper steps to prevent another Nike incident. A lot of things are happening, ARADCOM is publishing an SOP which controls with ironclad measures when missiles will be aboveground and when they may be belowground, the number of missiles where work is done on the missile. Where they have waived quantity-distance considerations, I think that in some cases they have decided to cut down on the total quantity of high explosives. The question you asked me, is that although you perhaps in the years gone by have seen odd situations in the box, we feel that this will be straightened out in the future.

Mr. Perkins: I realize that. This situation that I described is one that I saw within the last two weeks and it is one which under my understanding at the present, the regulations does not necessitate a waiver. It is a site that is being converted and it will ~~be~~ work itself out.

Col. Costabile: We are not policemen of the situation.

Mr. Perkins: I realize that.

Col. Costabile: That is a command responsibility and that violation would be



picked up by the Inspector General or by their own safety personnel. The fact that they are violating the number of warheads and missiles in a general storage pattern is one that they would have to correct. We can not anymore than we can say that the cause at Middletown was a standard operating procedure, everything a comedy of errors, that happened there was being corrected, and that's why ten people were killed.

Mr. Bishoff: We can't give you a definite answer, I would have to actually see how the missiles were placed before making an analysis of it, it would be pretty hard to predict without seeing the position of these missiles in the box whether we feel that substantial structural <sup>damage</sup> would occur to buildings at 528 ft.

Capt. Jenkins: There is no attempt here to put anyone on the spot, ~~we~~ appreciate very much your presentation. I will turn the meeting over to Col. Hamilton now.

Col. Hamilton: Dr. Ilsley will give a report on the status of underground storage.

Dr. Ilsley: The final report by the research team is now being distributed for final correction and then we expect that it will be sent to the <sup>parent</sup> work group probably the first week in January.

Col. Hamilton: Thank you. Is the Air Force ready to make its comment on the procedure on hazard classification yet?

Col. Fincke: We're getting some objections from the field, it's still in the mill. I'm afraid to give another date, it should be by the next meeting if we don't have one in December. ARDC is the one that has questions.

Col. Hamilton: The Piers and Wharves Manuals have been sent to the Secretaries as recommended procedure to be followed.

Mr. Bishoff: I'd like to ask a question about the method in which the P&W Manual was sent over. When it got thru the AsstSecArmy it passed thru rather quickly to DCS/Log and they didn't know what to do with it. The memo sent with the copies as I recall wasn't asking for approval of the manual so the Army was at a loss as

to how to disseminate the information. We were in hopes that we could advise the DCS/Log individual as to what steps the Board was going to take with regard to getting the P&W Manual approved.

Col. Couch: It was decided by the Board at a Board meeting that the manual would not be submitted to the Services with the idea of it becoming a joint publication. Certain portions of it, Chapter IV, was to be published as a DOD Directive and that is going, or is in the process now. The remaining portions of the manual were submitted to the Services to use to the extent that they deemed desirable.

Col. Fincke: It wasn't pointed out in the letter that Chapter IV was going to be pulled out and submitted to the Secretaries. This is a point I looked for too. They sent this over as a recommendation and here are all these quantity-distance tables with no indication as to whether we're going to be bound by them.

Mr. Breeding: The memorandum you received was different from the one that was sent to the Secretaries.

Col. Hamilton: Paragraph 2 states "The Board plans to submit the quantity-distance requirements (Chapter IV) of the Manual to the Assistant Secretary of Defense (S&L) at a later date as a proposed Department of Defense Directive."

Col. Costabile: The point in question here as far as the Army is concerned, is they are not servicing it for approval by the Services. The way it came it leaves it nebulous as far as the Secretary of the Army or DCS/Log as to what to do with it. That thing is going to go along for another year before somebody ~~comes along and~~ tells them to send it around for service approval for comments again and we'll hold it up for another six years of trying to get it approved.

Mr. Bishoff: There are certain elements in the Army that want to use Chapter IV and we're sort of in no-man's land, we can't for certain say use it because we've got the DOD Directive published in TM 9-1903 which was mandatory and if we circulate

this manual for information and guidance then where it contradicts TM 9-1903, where are you?

Col. Hamilton: Chapter IV is going to be handled by separate action.

Mr. Bishoff: In essence what I am saying is let's not delay because we don't know exactly what to tell people. If the Board intends to have the Chapter IV published as a DOD Directive, let's push it and get it off and then we'll change TM 9-1903 if the Army buys this.

Col. Couch: The purpose of sending these over to you was for you to go ahead and use them to the extent you wish, if you don't want to use them you don't need to.

Mr. Bishoff: As I say there are certain people/who want to use this right away, but the Army hasn't voted on it yet.

Col. Couch: Then this becomes an Army decision as to whether or not to use them.

Mr. Bishoff: Our purpose in raising the question is this, we'd like to know what the Board is going to do to get this published. We'd like to know when so that we can advise the Army.

Col. Couch: This was the Board's decision to handle it in this manner, not the staff's position.

Col. Fincke: What Mr. Bishoff is recommending and I second it is that we expedite getting this Chapter IV to DOD for approval.

Mr. Breeding: We just got those things back the day we sent them to the Board Members and the Secretaries. Just as soon as the Chairman decides how he wants Chapter IV handled, it's going to be taken out and written in such a way so it can be presented to the Services for their comments in the normal procedure of getting a DOD Directive handled. Then we'll have to come back ~~to~~ from the Service Secretaries, once they have stated their position on the thing it will have to be discussed at the Board meeting and then finally sent to OSD(S&L) as a proposed DOD Directive.

Col. Couch: Then rather than the Services replying to this memorandum, you will submit to them still another memorandum.

Mr. Breeding: Yes, with Chapter IV written up in DOD Directive form.

Col. Hamilton: I'll pass the comments on to the Captain. We have one other item here, with respect to Mr. Herman attending the NATO conference on quantity-distance standards proposed for use by NATO countries. I believe most of you are familiar with the background on this, but I'll run over it very quickly for those that aren't. As you know, in many of the European countries, they don't have quantity-distance standards that ~~are~~ we feel are as effective as the ones we have; in some of the countries, they have practically no standards at all. As a result, in some of the areas overseas, particularly in Nato areas, there has been some doubt as to the minimum criteria that could be used for the storage of ammunition. The Americans have tried to use American standards where possible, but there are some places where, simply because of the limitation in land available in some of those overseas areas, they have not been able to use American standards. In those cases they have made agreements with the local Governments and have tried to satisfy the local Governments. An effort is being made by SHAPE to come up with a NATO minimum standard, to get all these people together, some of them have standards, some don't, - on one to which they would all agree to use within the overseas operational areas. As I understand it that ~~was~~ the sole purpose of this minimum standard. There ~~were~~ <sup>are</sup> quite a number of other subjects to be discussed with respect to the problem of storage of ammunition and a U. S. representative to discuss all of these problems, logistic aspects as well as safety, was appointed some time ago. I believe Mr. McInerny of OAC was appointed. Mr. Herman was asked to serve as a specialist in the field of explosives safety, particularly with respect to attempting to draw up a minimum standard that Nato could use. SHAPE asked that

he come over to serve on their staff for that purpose <sup>but</sup> ~~and~~ the people in DCS/Log thought it would be more appropriate if he went over as a part of the official U. S. representation. The latest development on that is that we have received a communication ~~from~~ <sup>from</sup> DCS/Log.

Mr. Herman: This proposal that SHAPE made was not a position, it was merely an attempt to try to get some of these loose ends tied together into a piece of paper. The NATO group is so large that they felt it was necessary to have a limited group to discuss this to come up with a final piece of paper which the NATO representatives could then come up with a position. There is no position on this existing piece of paper. We're supposed to rework this paper, find out the comments from the other countries and find out if there is any common ground, then a position can be taken. This is the meeting proposed for next Monday.

Col. Hamilton: This communication was prepared as a guide for Mr. Herman and there are some instructions in here. He has been instructed to "present the U.S. standards applicable to the proposal and to clearly define points of departure from those contained in the SHAPE proposal" a. "Assist the other delegates in the preparation of a new proposal for presentation to SHAPE and to subject group of experts for comment." In view of the a. proposal it was the Chairman's feeling that ~~that~~ <sup>this</sup> could be very well done by Mr. McNerny, that ~~it~~ <sup>it</sup> wouldn't require any deep technical analysis to simply compare the two standards. If that is all that Mr. Herman is to do and he is to be limited to that, it was the Chairman's feeling that there's not much point in him going over, that Mr. McNerny could very well handle it, simply pointing out the points of difference between the U. S. standard and the proposed standards over there. The Chairman proposed to send this letter to DCS/Log. "Under conditions specified in and the limitations imposed by the referenced letter, this office considers that little can be contributed or gained



by the presence of Mr. Herman as a U. S. Delegate at the forthcoming conference. It is recommended that U. S. action be left to the regular U. S. delegation or a designated member of that group."

Col. Couch: You might explain that Mr. McInerney is the chairman of the group, there's also Mr. Brzezinski of the Navy and Col. Lappin of the Air Force which are members of the group.

Mr. Roylance: What deleted the b. item from that, I haven't heard?

Mr. Herman: In the meetings we have had with DCS/Log there have been the positions particularly with the Army and Air Force Members that first they would never go along with anything other than our existing DOD Directive. They feel that even though this meeting is supposed to be an ADHOC meeting and there are to be no minutes taken, any proposal of this group in effect would be the U. S. position which they could not very well turn down at a later date and therefore, it was more or less indicated that I shouldn't take a position on anything unless it is our existing regulations. These existing regulations were not our position at the last two meetings in which only the Army and Navy delegates have participated. In effect we would very definitely put the Board and me personally in jeopardy to go and make any recommendations other than the U. S. standards based on the meetings held.

Mr. Roylance: I'd like to comment a little on that. I think we're being pretty unrealistic if we say that we're not going to store anything except under the U. S. standards because this is impossible. We don't have them over there, we never will have them and it's my opinion that we might just as well get in on something that is the best that we could get and have a little bit of say in what goes into the making of it.

Col. Costabile: I think that's a command decision over there, it doesn't have any bearing on the organization.

Mr. Roylance: It isn't in the Nato interestx program.

Col. Costabile: We don't get into the Nato problems other than distances here in this country, at least not from an Ordnance point of view.

Mr. Herman: AFR 86-6 which implements the DOD Directive states that this is also applicable to overseas commands, it doesn't say that they can't waive it.

Col. Fincke: It seems to me that the Board is getting out of its jurisdiction when we start talking about this U. S. position to this Nato thing. What DCS/Log has asked as I get it is for Mr. Herman to go as technical advisor to the U. S. delegation.

Col. Hamilton: No, that's the difficulty. He has been designated as the U. S. representative.

Col. Fincke: They have asked you to be a U. S. representative? Then it's up to the three Services to determine the U. S. position and work it out with you as to how far you can negotiate. To me this is not a problem of the Board. If the Chairman of the Board doesn't think it's worth your while to go over there under the restrictions they're imposing on you, then he should make the decision that you're not available to go or you are available to go. But for us to determine what you're going to negotiate and what position you're going to take, this is up to the U. S. representatives on the committee.

Mr. Herman: This has been merely for information at this meeting, not for vote.

Col. Fincke: I agree with Mr. Roylance that we can't take a position and say that this is it and there's no sense in going to negotiate, but I don't think this is the place to thrash that out.

Col. Couch: We're only telling you that there's no point in his being available if he's not going to do anything when he gets over there.

Mr. Roylance: I still don't know what happened to part b. "assist other delegates..."

Col. Couch: If you follow the first one you can't do the second.

Mr. Roylance: He can present it for what it's worth and let it stop at that.

Capt. McKellar: I don't think he would have to go in an advisory capacity only, if he could be of technical assistance it might be of some value here to let him go.

Col. Couch: We understood that the initial purpose of Mr. Herman going over was to help a small group prepare a proposal which would later be presented to the full group, which is Mr. McInerney, Brzezinski, Col. Lappin and the other countries which would be presented to them in February; that his going over there would not necessarily be the presentation of an American position, it would be going over to prepare a table which would later on be <sup>a</sup> ~~the~~ basis for a preparation of an American position. However, it seems that not only this piece of paper but the discussions that we've had with the Army, Navy and Air Force Members, they are so firm with their position that no U. S. position should be different from the DOD Directive, that it puts the individual who is going over in this forthcoming meeting <sup>in a position</sup> such that he can't do anything because he goes over with the instruction that he must <sup>not</sup> agree to anything that isn't following the DOD Directive.

Mr. Roylance: He's not agreeing to anything as I understand it, all he's doing is helping prepare a paper.

Col. Couch: That would be our understanding. This group feels that this is not the true facts of the case, that if he goes over and says anything this becomes understood as a U. S. position.

Capt. McKellar: Unless he is deputized by the Secretary of Defense to specifically state the U. S. position, I think he has no authority to do so.

Col. Couch: DCS/Log has been delegated the responsibility by the Secretary of Defense to monitor this particular subject matter so what DCS/Log says can then become authority.

Col. Hamilton: Do you feel that this is something that should be further discussed with DCS/Log, that it would be desirable for Mr. Herman to sit in as a member of the working group or should we just simply send this letter to the effect that under the limitations imposed by the letter that little can be gained by ~~the~~ Mr. Herman going over?

Mr. Roylance: It all depends on what he's going over for. If you read the thing literally he's going over to present the U. S. position and also to help them draft up something else.

Col. Fincke: As I understand it this is an AdHoc group and Herman is going over to represent the U. S. position and his instructions are that we would like to stick to our standards. You go over there and present our standards and then we see what you can work out with that as a basis. He may have to come back for instructions ~~with~~ like our negotiators with the Russians do. When they see that things are bogged down they say they'll bring it back and present it to them. I don't see anything wrong with him going if the Board can make him available for that period of time. I think he would have to take his instructions from the U. S. representatives and not from this Board as to what he should use as a basis for negotiations.

Mr. Herman: Col. Lappin said in the meetings that anything we discussed would be interpreted, written or unwritten, as a U. S. position/<sup>and</sup>we would then be in an embarrassing position to go back and say we don't buy it. Right now there is no paper you can take a position on, this is merely a proposal by SHAPE as a point of departure for discussion but according to meetings that we have had, the

Air Force and Army representatives at these meetings have stated that we don't care, we can't possibly do anything but go along with the DOD Directives so there's no use in trying to come up with anything other than that. When they get into a discussion, you should merely say this is what we have in our standards and this is what we think you should use.

Col. Fincke: They sit around and decide that they can't buy it and say this is what we can buy and you bring it back and

Mr. Herman: But this has been going on for three years!

Col. Couch: And we feel that anyone can do this, it doesn't have to be Mr. Herman.

Col. Fincke: That's quite true, I think it's up to whether you can spare the time for him to go.

Col. Couch: We're going to continue to discuss this with DCS/Log. It'll have to be finalized by Friday.

Col. Hamilton: Col. Fincke, is it your opinion that it would be advisable for Mr. Herman to go?

Col. Fincke: I'm on the fence, it doesn't make any difference to me one way or the other, I think anybody that gives the U. S. position of the three services can go over there and represent us.

Mr. Roylance: I think there's more to it than just presenting the U. S. position, to help them come up with something. That hasn't been deleted yet as far as I can see.

Col. Hamilton: It hasn't been deleted, it's not entirely compatible with that other limitation, I think that's something that has to be discussed with DCS/Log.

Mr. Roylance: They asked him to go and if he can go yes, but I don't think he should be limited just to saying this is the U. S. position, we don't buy anything else, this is ridiculous.

Col. Fincke: We're not the people to make that decision.



Mr. Herman: I might add that the representatives that attend these meetings are from Col. Fincke's office, Mr. Roylance's office, and Col. Costabile's office.

Col. Fincke: We're wearing two different hats right now.

Col. Costabile: I agree with Capt. Jenkins.

Col. Hamilton: I was asked by the Chairman to let the Army representation here know that he was over in the Secretary of Army's office a few days ago regarding the Holston Ordnance Works rail situation and the only points he presented were the ones presented in a letter some time ago. In other words, he gave six different reasons why the Southern Railroad should not be given the right to use the present track thru the explosives area for common carrier traffic. Apparently it has gotten hot again and there have been some discussions on it. The Chairman thought it might be well if we skipped the December meeting and had our next meeting in January due to the holidays. What is your pleasure?

Agreed by all Members.

Meeting adjourned at 1130.

# WEIGHT AND TYPE OF EXPLOSIVES IN MISSILES

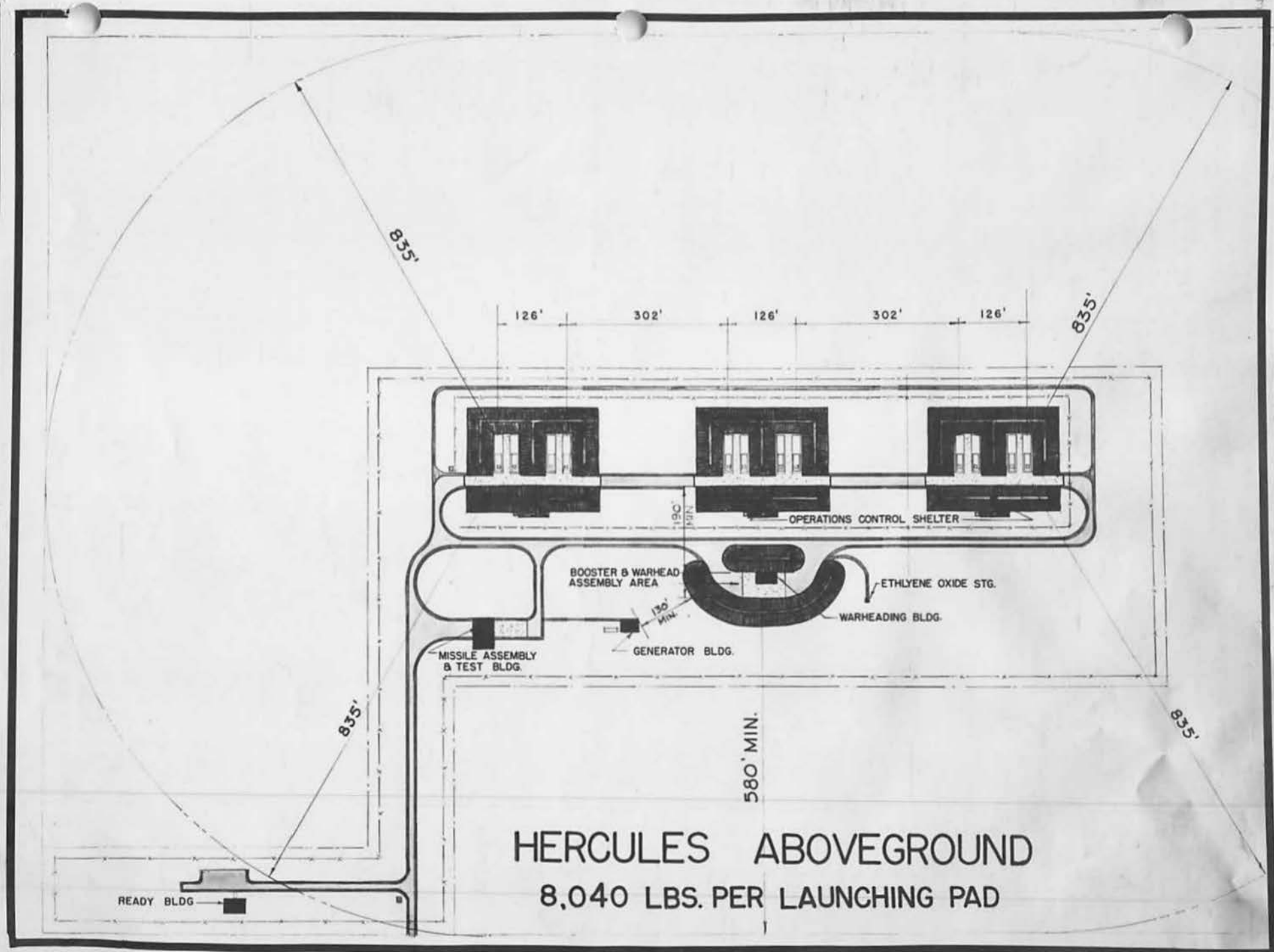
MISSILE	WARHEAD	SUSTAINER MOTOR	BOOSTERS	IGNITER DET. CORD, ETC.	TOTAL	
<u>AJAX</u>	ACTUAL LBS	155	—	750	37	942
	LBS FOR GD	155	—	750	37	942
	TYPE	COMP B (RDX & TNT)	RFNA, UDMH & JP-4 (LIQUID MOTOR)	DOUBLE BASE CAST PROPELLANT	BLACK POWDER & PETN	
<u>HERCULES</u>	ACTUAL LBS	600	2300	3000	144	6044
	LBS FOR GD	600	276	3000	144	4020
	TYPE	H-6 (RDX, TNT & AL) OR HBX (RDX, TNT & AL)	POLYSULFIDE PERCHLORATE SOLID PROPELLANT	DOUBLE BASE CAST PROPELLANT	BLACK POWDER & PETN	
<u>HAWK</u>	ACTUAL LBS	75	627	0	NEGLIGIBLE	702
	LBS FOR GD	75	0	0	NEGLIGIBLE	75
	TYPE	H-6 (RDX, TNT & AL)	POLYURETHANE PERCHLORATE SOLID PROPELLANT	POLYURETHANE PERCHLORATE SOLID PROPELLANT	PYROTECHNIC TYPE BLACK POWDER & PELLETS	

UNCLASSIFIED

Classified by PERM 1001149  
 SUBJECT TO PERM 1001149  
 SCHEMATICALLY DOCUMENTED AT TWO YEAR  
 INTERVALS  
 DECLASSIFIED ON 31 JAN 2027  
 1973

3886

3



**HERCULES ABOVEGROUND**  
**8,040 LBS. PER LAUNCHING PAD**

MISSILE SERVICE BLDG

650'

87'

192'

87'

650'

50'

CONVERTER BLDG

C.W. RADAR TOWER

PULSE ACQ TOWER

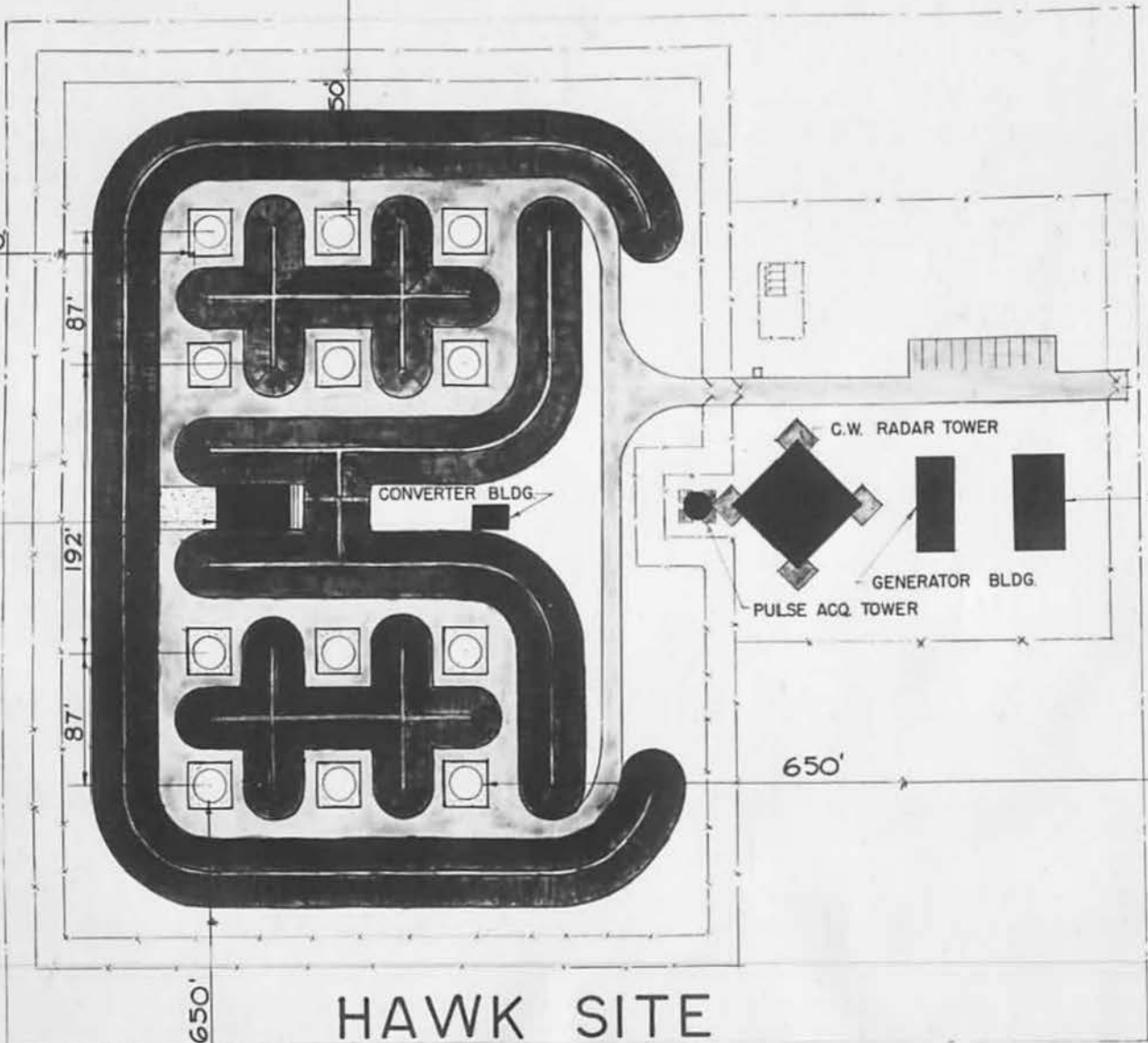
GENERATOR BLDG

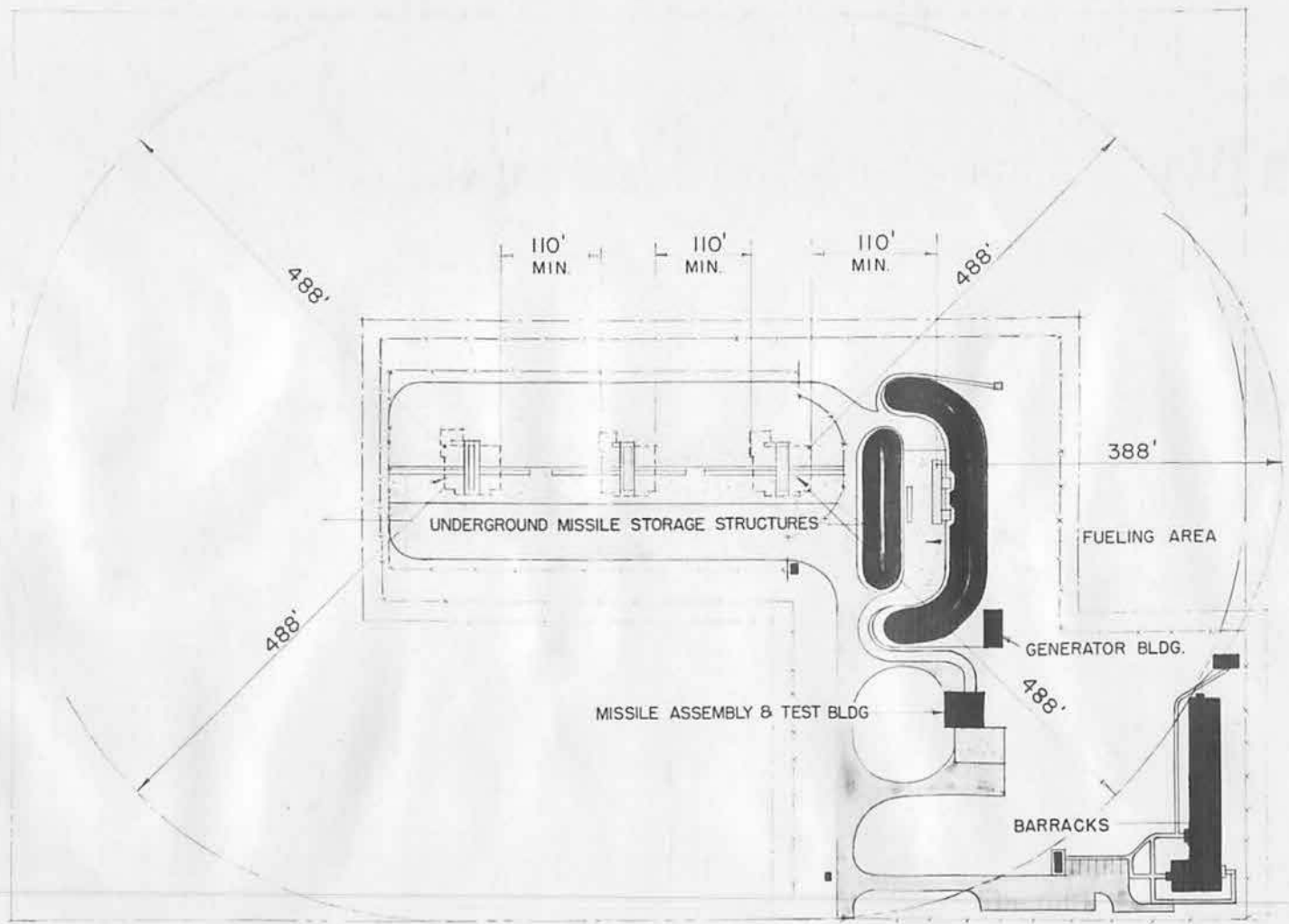
OPERATIONS BLDG.

650'

HAWK SITE  
225 LBS PER LAUNCHING PAD

3887

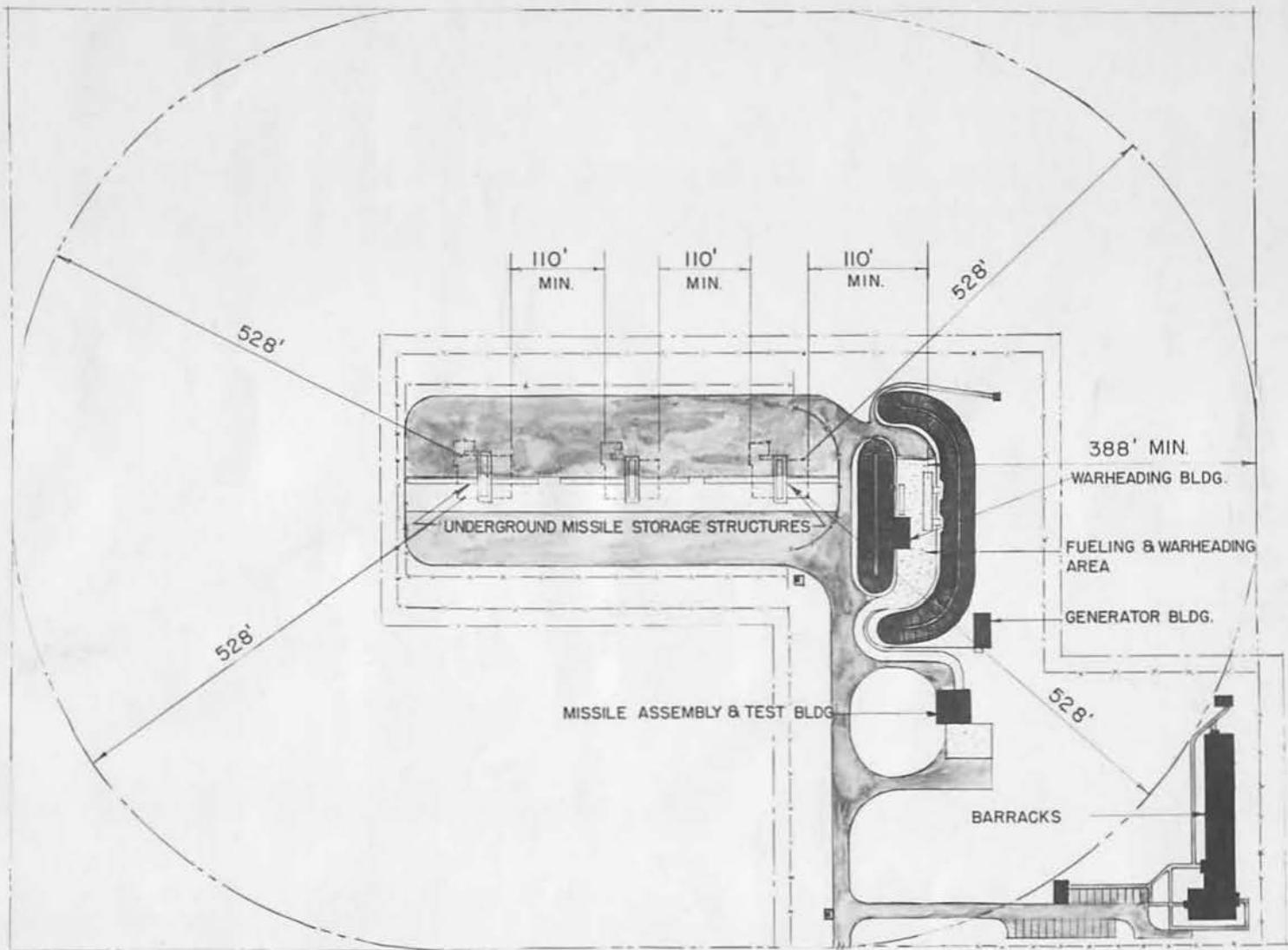




AJAX UNDERGROUND  
 20,000 LBS. PER MAGAZINE

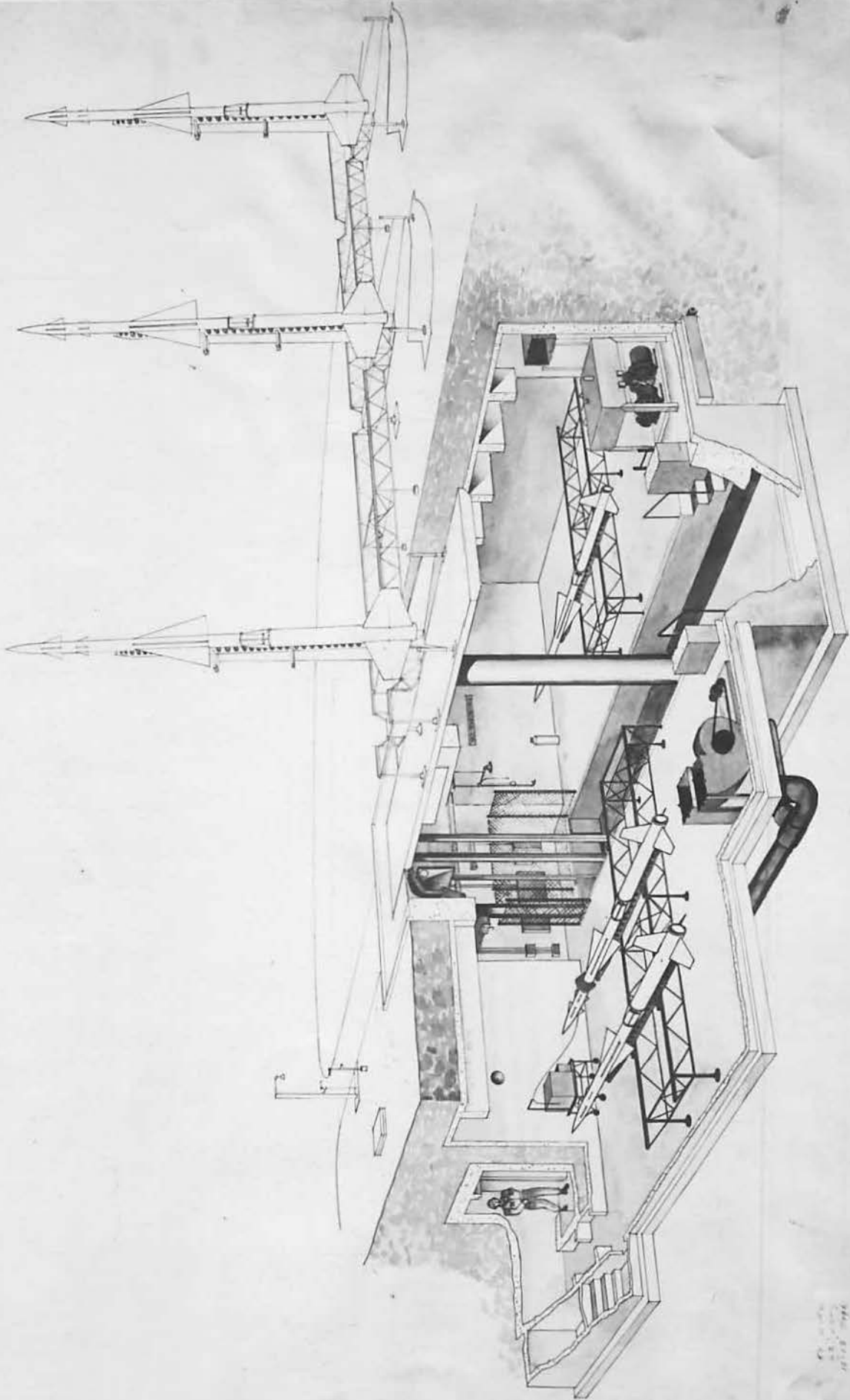
XXXX





HERCULES UNDERGROUND  
25,000 LBS. PER MAGAZINE

3889



# UNDERGROUND MISSILE STORAGE STRUCTURE

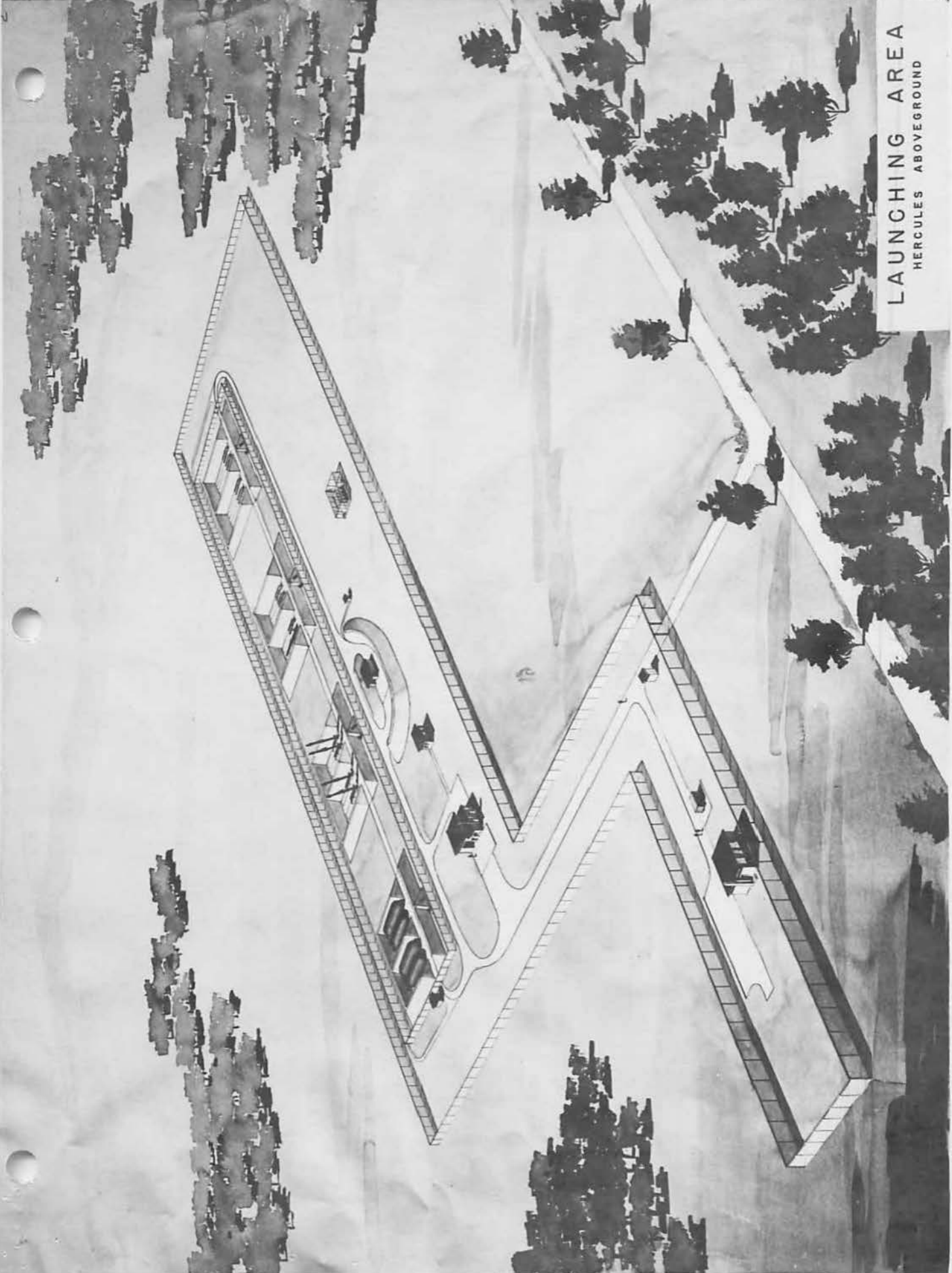
REVISED

DEFINITIONS

<u>PUBLIC HIGHWAY DISTANCE:</u>	Safe distance (from explosion blast) for persons in the open or traveling on highways
<u>INHABITED BUILDING DISTANCE:</u>	Safe distance (from explosion blast) for protecting buildings from substantial structural damage
<u>INTRALINE AND MAGAZINE DISTANCES</u>	Prevent simultaneous detonation of two separate explosives facilities within the site
<u>BARRICADE</u>	By State law, natural or artificial mound, in place between explosives stored aboveground and the facility to be protected, permit reduction of safety distances by one-half

1638  
9391

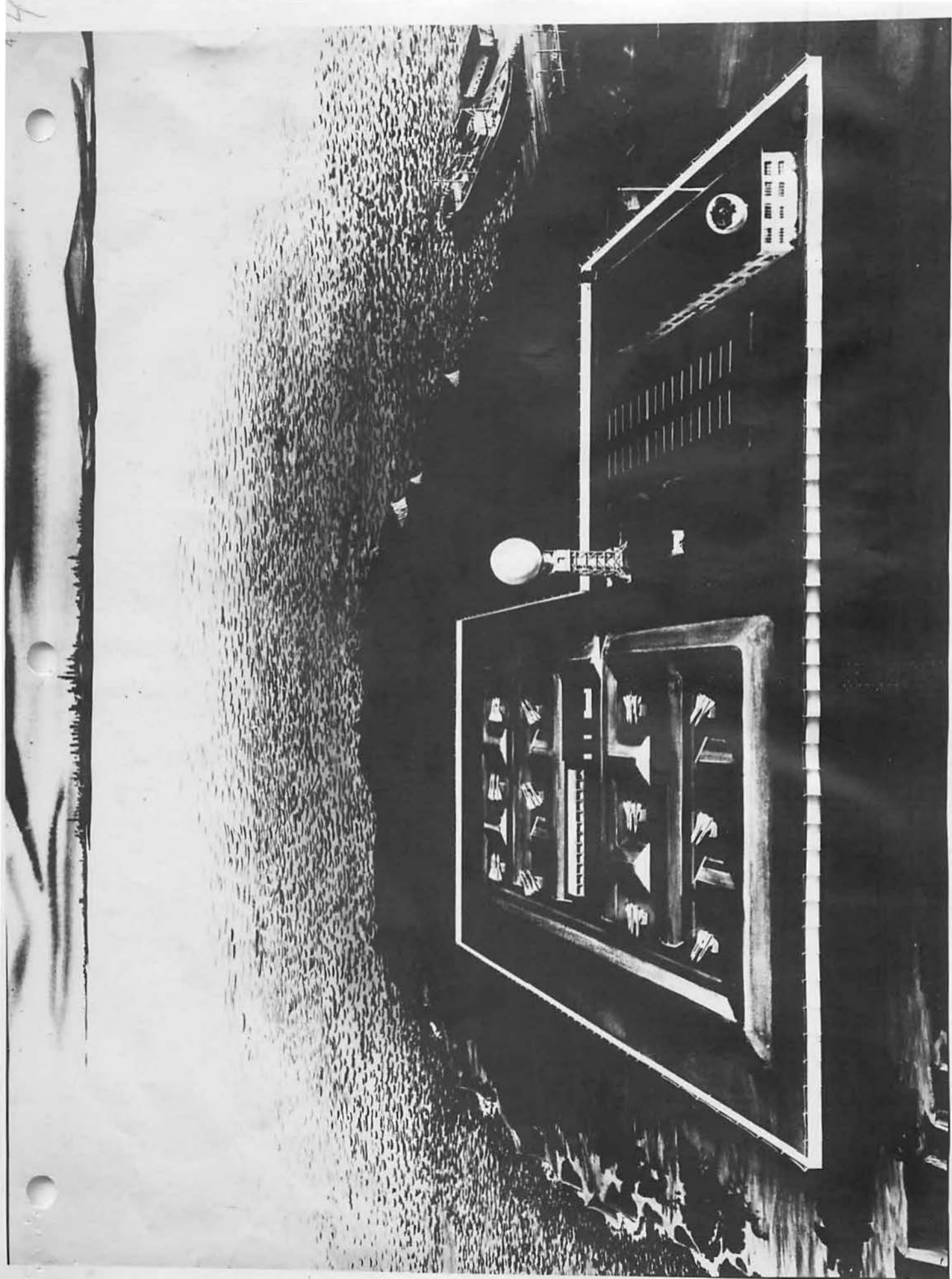
2



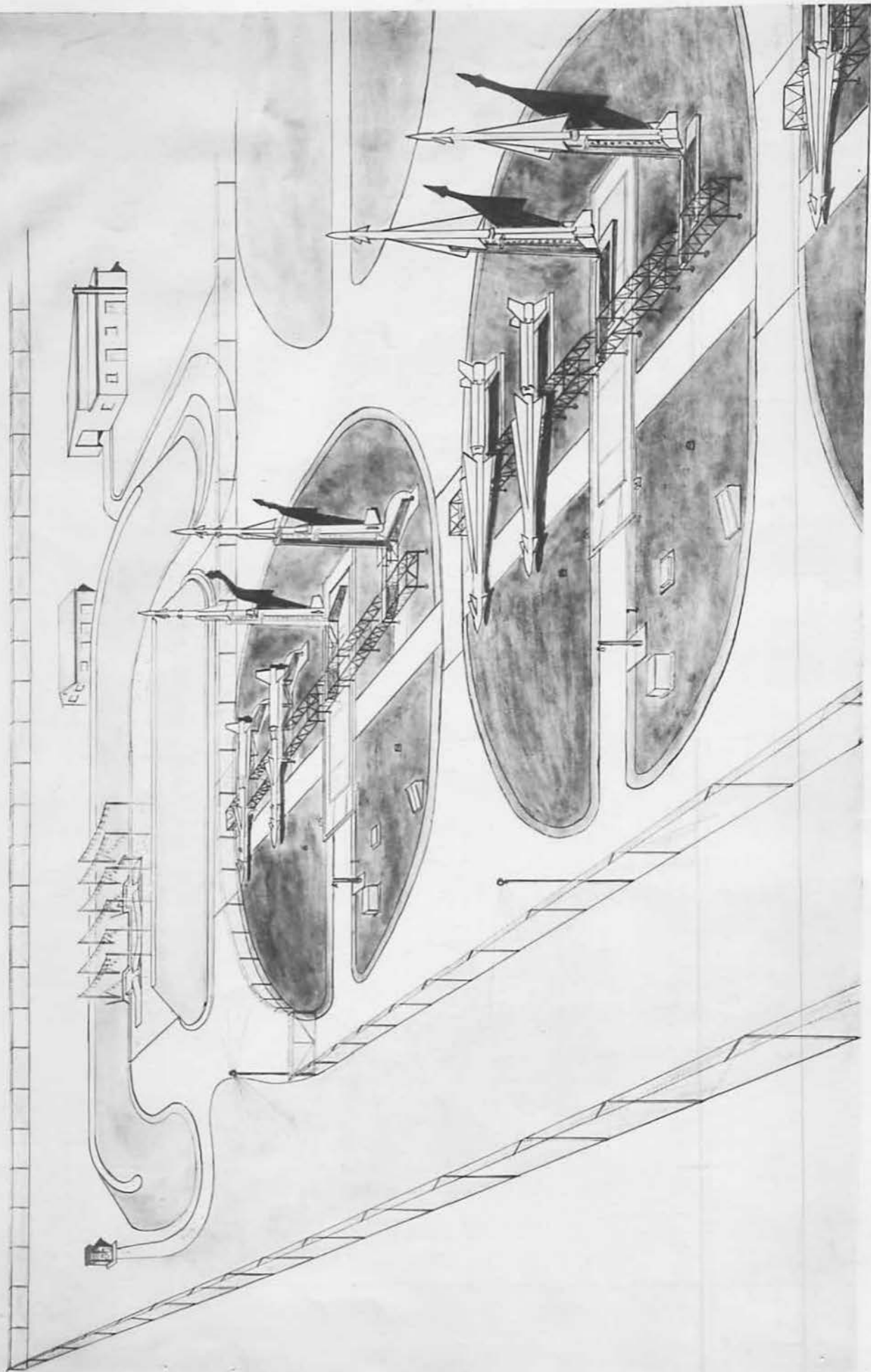
LAUNCHING AREA  
HERCULES ABOVEGROUND

3892

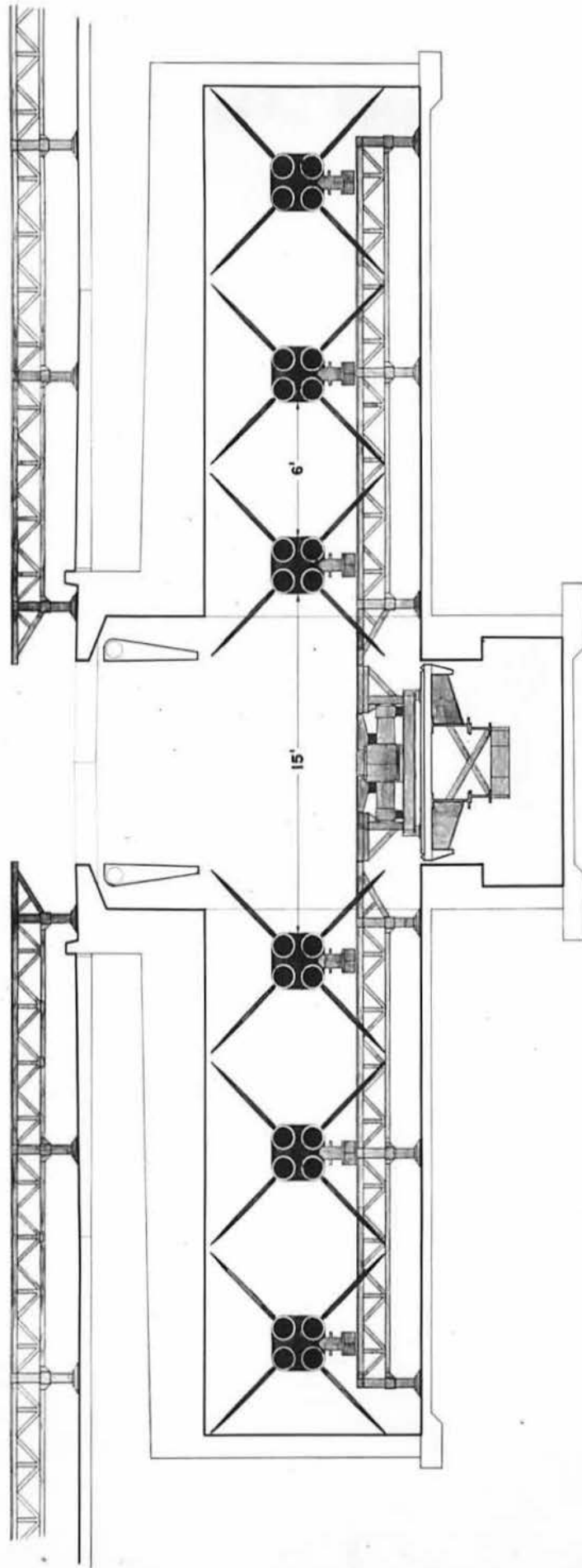




3893



3894



HERCULES UNDERGROUND  
25,000 LBS.

DISTANCES PROVIDED AT ARMY MISSILE SITES  
VS  
STATE REQUIREMENTS

	INHABITED BUILDING DISTANCE (FT)		PUBLIC HIGHWAY DISTANCE (FT)	
	PROVIDED	STATE REQUIREMENT	PROVIDED	STATE REQUIREMENT
NIKE AJAX UNDERGROUND	488	No Standard	292	No Standard
NIKE HERCULES UNDERGROUND	528	No Standard	318	No Standard
NIKE HERCULES ABOVEGROUND	835	835	500	255
HAWK	650	270	160	110